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Digital Nativeness and translanguaging in Vojvodina: Multilingualism, English language media, and Vojvodina Hungarian linguistic practices

PhD dissertation

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Abstract

The present dissertation explores the intersection of Digital Nativeness and multilingualism in Vojvodina, Serbia, among 615 minority Hungarians in order to determine whether and in what ways higher degrees of Digital Nativeness influence Vojvodina Hungarians' language choices, translanguaging practices, and general attitudes towards Hungarian, Serbian, and English, as well as translanguaging in the present-day context of Vojvodina Hungarian communities. A preliminary study with 63 Vojvodina Hungarians was conducted with similar goals prior to the finalization of the data collection method and focus, the results of which supported the initial hypothesis that there is a connection between higher degrees of digital expertise, age, and specific linguistic practices and preferences of English. By employing a research design that is based on method and data triangulation, the data was collected via interviews and a questionnaire survey shared on various social media platforms and implemented adaptations of Lee's 2014 techno-biographical interview and Helsper and Eynon's 2010 Digital Nativeness Test to identify digital and linguistic practices and habits of the Vojvodina Hungarian participants. With the help of SPSS version 26 and Excel, descriptive statistics, Pearson correlation analyses, Chi-Square tests, and independent samples *t*-tests were conducted. The quantitative analyses revealed that while age is a factor, the extent of one's Digital Nativeness depends on a variety of other (social, educational, and personal) characteristics alongside age which were found to influence language choices and attitudes towards translanguaging. Especially prevalent among younger individuals, higher degrees of Digital Nativeness were found to significantly and positively correlate with openness towards translanguaging, preference for English in digital spaces, higher degrees of English language media consumption as well as use. As an extension of these results, the qualitative data aimed to present Vojvodina Hungarians' experiences with language and technology over time and analyze authentic examples of translanguaging taken from the participants' digital conversations. Through Gal and Irvine's (2019) semiotic processes, the dissertation examines how the Vojvodina Hungarian participants ideologically justify and reconcile their multilingual practices. Results reveal a high level of digital integration in the daily lives of the Vojvodina Hungarian interviewees and also highlight the crucial role that digital platforms play in the maintenance of social ties within the Vojvodina Hungarian community. These findings further challenge the previously imagined and supposedly unbridgeable gap between Digital Natives and Immigrants and highlight how differences in digital skills and breadth of use are much more dependent on individual interests and personal life history than solely the age of the individual. The analysis of Vojvodina

speakers' shared digital linguistic data showed how digital spaces can foster and provide multimodal platforms for habitual, practical, and intentional translanguaging, which was found to play a significant role in shaping their online identities, and is constantly influenced by a combination of contextual, social, and personal factors.

Keywords: Digital Nativeness, multilingualism, Vojvodina Hungarians, translanguaging, digital linguistic practices, Serbia

Dissertation declaration

I hereby declare that the present dissertation, including the materials used and presented are the result of my own original research under the supervision of Associate Professor Dr. Anna Fenyvesi. No part of the present dissertation has been submitted for any award, degree, or any other qualification in my name at this university or any other institution. All of the sources and other materials that have been previously published are appropriately quoted and credited in the present dissertation in the respective sections. Apart from the due references, the dissertation is entirely my own work. Parts of the present dissertation's text have appeared in my most recent publications, which were done concurrently with the dissertation (i.e., Kostic 2024, 2025a, 2025b). I agree that the final version of my thesis is made available at the university and its research repository, as well as search engines.

Adrianna Kostic
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1. Introduction

Already in the early 2000s, Baker (2001: 43) emphasized that the global population of bi- and multilinguals was expanding as a result of increased international migration, world economy, digital communication and media, which he tied to the creation of a "global village." However, as Blommaert (2010: 1) later observed, sociolinguistically speaking, the world has not become a single global village, but instead, a "tremendously complex web of villages, towns, neighbourhoods" and "settlements connected by material and symbolic ties in often unpredictable ways," which underscores how deeply modern day mobility has impacted how we view and talk about multilingualism. This shift is often described as "super-diversity," which is a term that suggests that diversity itself has rapidly become a complex and layered phenomenon as a result of various factors at interplay, such as legal status, social background, and ethnicity among others (Blommaert 2010: 7). Blommaert (2010: 8) also demonstrated, through various anecdotes from his own "globalized neighbourhood," how the linguistic realities of various groups are diverse, which accentuates how multilingualism can manifest in different ways even within the same neighborhood according to the complex needs of individuals and the specific domains where their interactions take place. However, these practices and realities are not solely limited to physical spaces, as they are just as present in digital environments that have also majorly contributed to how individuals communicate, navigate digital and non-digital spaces, and perform their identities.

Over the past 20–25 years a digital world has emerged and become populated in ways we could not have imagined before. This predominantly English language medium (Lee 2016) with new communicative properties has had a great impact not only on our daily tasks and habits but also profoundly influenced our linguistic practices (Prensky 2001; Lee 2014; Darvin 2016). Studies have found that due to people's different goals, values, and interests, there are notable differences in the ways they use the internet and communicate with others (Hargittai 2010; Jarrahi and Eshraghi 2019). Taking this into account, a crucial notion and phenomenon that needs to be considered at this point relates to the users of the internet, which literature frequently refers to as Digital Nativeness (Hargittai 2010; Helsper and Eynon 2010; White and Le Cornu 2011; Teo 2013). Initially, Prensky (2001) introduced in his studies a concept pair, Digital Natives and Digital Immigrants, to distinguish between two groups of internet users. While Digital Immigrants were described as individuals who encountered digital technology and the internet at later points in their lives, Digital Natives were defined as people who grew up immersed in digital technologies (Prensky 2001). Due to the nature of Digital Natives'

presumed upbringing, these internet users were believed to be more likely to be digital-oriented in various areas of life, including communication, studying, looking up information, and running errands digitally, which all require the frequent use of language(s) online (Prensky 2001). In comparison, Digital Immigrants were described as individuals who are more likely to prefer traditional and face-to-face interactions and errands (Prensky 2001). Eventually, subsequent research quickly began challenging the idea of this phenomenon being solely based on generation and birthyear, and instead started exploring a variety of socioeconomic, social, and individual factors such as digital skills, breadth of internet use, and personal experience to see how these interacted (Helsper and Eynon 2010; Hargittai 2010; Teo 2013). Consequently, the more nuanced understandings of Digital Nativeness are no longer as restrictive as the former ones, nor are they reiterating the original dichotomy (i.e. Digital Natives and Digital Immigrants) that was once defined by Prensky (2001). Due to this, researchers now are much less likely to categorize internet users within the original binary (Bennett et al. 2008; White and Le Cornu 2011), and instead foreground the idea that Digital Nativeness should be understood as a spectrum or continuum, where due to various social, personal, and demographic factors, among others, one's degree of Digital Nativeness may vary. Recent studies that have dealt with the phenomenon conclude that Digital Nativeness is not an innate or static condition (Helsper and Eynon 2010; Kirschner and De Bruyckere 2017), but rather a dynamic and constantly evolving practice, which makes the dichotomy as well as the original terms, but especially the term 'Digital Immigrant,' increasingly irrelevant. In light of this, Digital Nativeness should be viewed as a continuum rather than a binary, an approach which the present dissertation also takes.

Furthermore, research has also been increasingly focused at looking into various potential connections between Digital Nativeness and teaching, learning, digital communication, digital literacy, language practices, and even upbringing (Pasfield-Neofitou 2013; Milutinović 2022; Chang and Chang 2023; Reid et al. 2023), often with the aim to examine and compare the experiences of those individuals who exhibit varying degrees of digital engagement and involvement. Given digitization's deep and ongoing impact on linguistic practices, it is increasingly important to examine its effects on minority languages due to the fact that speakers of minority and majority languages experience digital spaces in various different ways (Kelly-Holmes 2004; Lee 2014; Lynn et al. 2015; Jongbloed-Faber et al. 2016). Minorities are often in disadvantaged positions in the physical world as they and their first languages coexist with speakers and their language which is more widely spoken, with a community in a country where

the official language of the state is also the latter (see also Göncz and Vörös 2005; Jánk and Rási 2023). Their minority position can often prevent the use of their first language in a number of private and public domains, which tends to bring about unfortunate situations that leave them at a disadvantage (see also Nguyen 2019; Bonnin and Unamuno 2021). The pressure to assimilate causes further disposition, which has been found to permeate online spaces too (Durham 2007; Lee 2014; Lackaff and Moner 2016; Cunliffe 2019). In light of this, one of the central aims of the present dissertation is to explore whether Digital Nativeness and engagement in translanguaging have the potential to empower speakers to withstand these external and assimilatory pressures that previous literature also addresses. While at first glance it does seem like there is no good solution to this omnipresent issue, recent studies have shown how extensively beneficial the promotion of translanguaging in digital spaces can be for minorities due to its flexible and supportive nature (Cenoz and Gorter 2017; Prošić-Santovac and Radović 2018; Ćorković 2019). Due to the widening availability of mobile networks, digital devices, and connectivity, the internet is rapidly becoming a space where multiple languages intersect in various ways (see also Merchant 2001; Leppänen 2007; Koutsogiannis and Mitsikopoulou 2007; Androutsopoulos 2007, 2015). For these reasons, online platforms are not solely viewed as ideal grounds for practicing translanguaging, but also for conducting research (Spilioti 2019; Jacquemet 2019). Studies on multilingualism have furthered our knowledge on how multilingual speakers successfully navigate and simultaneously negotiate their identities using multiple languages during communication (cf. García and Li 2014; Spilioti 2019; Darvin 2022; Almashour 2024). In this sense, the terms multilingualism and translanguaging capture this shift away from traditional and separatist views of languages, while also signifying a move towards a much more flexible and open-minded approach: multilingualism and translanguaging support some of the same ideas, whereby the speaker transcends linguistic boundaries and uses multiple languages in communication regardless of their proficiency in them (García and Li 2014; Androutsopoulos 2015; Aleksić and García 2022). Multilingualism aims to erase the boundaries between languages that have been socio-politically constructed and separated, and, instead, views languages as interconnected complex systems (Canagarajah 2011; Li 2011; García and Li 2014; Androutsopoulos 2015; Lee 2016). From this perspective, translanguaging, originally redefined from a pedagogical approach (Williams 1994; Baker 2001) to a linguistic theory by García and Li (2014), is "the deployment of a speaker's full linguistic repertoire without regard for watchful adherence to the socially and politically defined boundaries of named (and usually national and state) languages" (Otheguy et al. 2015: 283). However, as Lee (2016: 11) notes, it is still "necessary to use socially accepted boundaries between languages to understand people's

cultural knowledge related to the languages they use online" as "labelling individual languages is still meaningful in that […] ordinary language users often talk about their meaning-making resources in terms of individual languages." Furthermore, labelling languages is also very important from the perspective of social groups, according to Canagarajah (2013: 16), as they serve as identity markers. This is something that researchers focusing on minorities (cf. Cenoz and Gorter 2017; Nguyen 2019; Bonnin and Unamuno 2021) also emphasize in their work, as there are cases where applying the approach of translanguaging can bring about the opposite effect, further marginalizing groups and communities that are already in disadvantageous positions. In this sense, how much minority speakers engage with digital spaces becomes very important as it can act as a bridge for their communication (cf. Androutsopoulos 2015; Cenoz and Gorter 2017). Through these practices, minority speakers (as well as anyone online) are more likely to bypass linguistic and spatial constraints, which in turn also allows them to express themselves flexibly and creatively using their entire linguistic repertoires, engage in translanguaging more freely, and rely on various multimodal sources that are available on the internet, but not so much in face-to-face contexts (cf. Vaisman 2011; Androutsopoulos 2015; Lee 2016; Cenoz and Gorter 2017; Ćorković 2019).

Translanguaging also has a social dimension to it, where the choice to translanguage is very often an intentional one and has an identity marking function (Gardner-Chloros et al. 2005; Auer 2005; Cenoz and Gorter 2011; Li 2011; Androutsopoulos 2015; Nightingale and Safont 2019). Although the phenomenon is steadily gaining acknowledgement and recognition, as Canagarajah (2017: 66) states, diversity is still frequently "treated as communicatively dysfunctional, presenting conflicting values that are difficult to negotiate. If diversity is acknowledged, it is treated as a part of social context that can be addressed as a feature of performance through one's underlying 'universal' competence." In large part due to monolingual ideologies that refer to languages in separation and reject non-normative linguistic practices, multilingual communication has long been stigmatized despite being an integral part of people's communicative practices around the world (Aleksić and García 2022). However, that is not to say that there have not been instances where multilingual practices were given recognition and initiatives were made in favor of them. For one, the case of Yugoslavia's language education program, between the 1960s and 1980s, is a great example that Mandić and Rácz (2023) look into, which strived to support multilingualism considering the former Yugoslavia's multiethnic composition (Mandić and Rácz 2023: 461) by introducing the Language of the Social Environment (LSE; *jezik društvene sredine* in Serbian, *környezeti nyelv*

in Hungarian). The LSE was understood as Hungarian in majority (i.e. Serbian) communities, like Serbian in minority communities, as an optional second language class at schools in areas of the former Yugoslavia that had a diverse ethnolinguistic population. One of the most multilingual areas of Serbia is Vojvodina (Ferdinand and Komlosi 2017; Trombitás and Szügyi 2019), where one of the largest cities, Subotica/Szabadka[1], is home to as many as fourteen languages spoken as first languages, many with an official status locally (Statistical Office of the Republic of Serbia 2012; Ferdinand and Komlosi 2017; Trombitás and Szügyi 2019). According to Mandić and Rácz (2023), the LSE classes were intended to promote bilingualism among monolingual majority individuals, who were, ideally, also to become bilingual, like most minority individuals on the territory of the former Yugoslavia. Mandić and Rácz (2023) have found that the ideology behind LSE viewed languages as resources for societal multilingualism and, at the same time, as a very solid basis for national unity. In Serbia, discussions about reinstating the subject began in the 2010s, and ultimately, the findings of Mandić and Rácz (2023) underscore how community and educational, societal, and institutional support remain just as vital today as they once were.

Lately, research has also started connecting Digital Nativeness and minority and endangered languages, often with the aim to reveal whether higher degrees of Digital Nativeness could strengthen digital communication among minority individuals and heighten the visibility and awareness of minority and endangered languages online (Galácz and Ságvári 2013; Jokinen et al. 2017), which could also potentially aid the process of documentation of these less visible languages digitally. Several studies have explored translanguaging among minority groups in Western Europe (Cenoz and Gorter 2017; Prošić-Santovac and Radović 2018; Ćorković 2019), and while some have also looked into Digital Nativeness (Helsper and Eynon 2010; Hargittai 2010; Correa 2016; Helsper 2021; Reid et al. 2023) and translanguaging (Tankosić and Litzenberg 2021; Darvin 2022; Dryden and Izadi 2023; Almashour 2024), the two perspectives are usually not combined. Because of this, research that specifically examines the intersection of these concepts is still scarce, and, especially in a Vojvodina Hungarian context, where various languages intersect, this has not been done at all.

Considering the lack of studies on digital media consumption, language choices, and recent trends in general linguistic practices in the largest minority Hungarian communities in

[1] All Vojvodina place names are given throughout this dissertation in their official, Serbian names as well as their traditional Hungarian names separated by a slash.

countries neighboring Hungary, the present study seeks to map out, in detail, the Vojvodina Hungarian minority's digital presence, linguistic practices and language choices mainly in digital, but to some extent in face-to-face situations as well. One of the primary reasons why the examination of translanguaging and Digital Nativeness together is crucial, especially in this particular minority context, is to understand whether, and if so, then how both digitization and the pressure of the widely spoken state language, Serbian, impact the linguistic practices of Vojvodina Hungarians as well as their maintenance of Hungarian. For this reason, the dissertation employs Gal and Irvine's (2019) semiotic framework to examine how actual linguistic practices are ideologically reconciled with the ideological construction of named languages. The dissertation also addresses the question of language vitality in the digital age through assessing the digital linguistic practices and the degree to which the participants of the study are digitally present and active, which is especially relevant for Vojvodina Hungarians, bearing in mind the ongoing demographic decline that has been occurring for well over a decade in the Vojvodina region (Palusek 2024). Last but certainly not least, one of the central aims of the dissertation is the description and the documentation of the Vojvodina Hungarian participants' digital linguistic practices. However, the dissertation also seeks to move beyond essentialist views of language mixing, and aims to foreground and present translanguaging as a vital and supportive resource for minority communication and identity, which is achieved through the analysis and presentation of authentic linguistic examples from the Vojvodina Hungarians' own digital interactions. While the present dissertation aims to foreground the supportive nature of translanguaging from the perspective of the minority identity, it also acknowledges that translanguaging is a very context-dependent practice, where "social actors" (Gu et al. 2026: 2) not only shape the practice itself, but also how it is perceived and talked about. In the Vojvodina context specifically, translanguaging is understood not as a replacement for Vojvodina Hungarian, but as a vital resource for navigating a highly multilingual and multicultural environment both physically and digitally (Kostic 2025).

In essence, the present dissertation aims to gain insight into the extent to which Vojvodina Hungarians exhibit characteristics of Digital Nativeness, while also focusing on how language choices, translanguaging practices, and attitudes towards translanguaging may vary according to the extent of one's Digital Nativeness. In light of the above, the present dissertation aims to answer the following research questions:

Research Question 1: To what extent do Vojvodina Hungarians exhibit characteristics of Digital Nativeness?

Research Question 2: In what ways do higher degrees of Digital Nativeness impact language choices and attitudes towards translanguaging among Vojvodina Hungarians?

Research Question 3: For what purpose and how do Vojvodina Hungarians use their languages in digital spaces?

Research Question 4: What factors influence the linguistic practices of Vojvodina Hungarians in digital spaces, particularly in terms of language choices and translanguaging?

To answer these research questions and also ensure that the results and the collected data are as valid as possible, the study employs a research design that is based on method and data triangulation (cf. Campbell and Fiske 1959; Webb et al. 1966; Carter et al. 2014), combining qualitative and quantitative data collection methods to study the same phenomenon from a variety of perspectives. In light of this, the data was collected via a questionnaire (in part based on an adapted version of Helsper and Eynon's Digital Nativeness Test from 2010), semi-structured interviews, and a dataset of translanguaging examples shared by the participants from their digital communication. The questionnaire data is in part used to calculate a composite score, the Digital Nativeness Score, which will make it possible to carry out statistical analyses of the relationship between Digital Nativeness and linguistic practices and choices; the interviews implement an adapted version of one of Lee's 2014 methodologies, the techno-biographical interview, in order to gain insight into the Vojvodina Hungarian participants' individual life stories in relation to technology and languages on the internet over an extended period of time. Furthermore, the interviews also aim to collect natural conversation data involving translanguaging, in the form of screenshots. Taking these into consideration, the qualitative data is intended to reveal and explore potential underlying factors, motivations, and feelings that might be influencing their digital and linguistic behaviors, and also their attitudes towards translanguaging in the present day.

Although translanguaging, Digital Nativeness, and minority language practices have been addressed numerous times in research individually, there is still a large gap in the literature that deals with the intersection of all three. This is particularly true within the Vojvodina Hungarian context, which remains under-researched in many other areas of linguistics as well. Therefore, the primary motivation behind the present dissertation is to attempt to fill this gap, explore these overlapping areas, and to provide valuable insight into the digital and linguistic practices of

Vojvodina Hungarians. Being a Vojvodina Hungarian myself, I not only practice translanguaging often but also come across it in my day-to-day life both in private and in public domains. Once unimaginable and stigmatized, this linguistic practice has lately become an ordinary and natural part of linguistic practices even in settings such as the workplace (cf. Räisänen 2018), even in the relatively linguistically conservative Vojvodina, as we will see later in the dissertation. As mentioned above in the first lines of the introduction, there is a multitude of underlying factors that have led to the omnipresence of translanguaging. Among the other motivations behind the present dissertation is the desire to not only explore but also challenge traditional views of language mixing, which are often stigmatized, by analyzing real instances of translanguaging and exploring how individuals are able to communicate clearly, effectively, and creatively in multilingual environments. Last but not least, the present dissertation also hopes to give voice to the Vojvodina Hungarian community's unique lived experiences in today's highly digital world.

The present dissertation consists of seven chapters: the current one (Chapter 1; in part based on Kostic 2024, 2025a, 2025b) has presented the larger contextual background of the study, the main concepts, research questions, and intended methodology briefly, as well as the significance and motivations behind it. Following the introduction, Chapter 2, Literature Review, provides a thorough overview of the literature, focusing on the key concepts and previous research findings relevant for the present dissertation (which in large part encompasses sections of Kostic 2024, 2025a, 2025b). Through examining how digital tools influence minority communities' visibility and motivation to engage in digital discourse online, this chapter provides the necessary framework behind why Digital Nativeness and digital linguistic practices need to be explored together in these multilingual contexts. In today's highly digital world, it is becoming increasingly important to examine the benefits and the potential challenges of digital spaces that linguistic minorities might face, as these play major roles in how successfully they can maintain their languages (cf. Kornai 2013). For these reasons, the concepts of translanguaging and multilingualism are explored in depth, specifically addressing the challenges and benefits associated with these within minority communities. Moreover, the dissertation explores how Digital Nativeness and translanguaging intersect with digital language practices and minority communities. These digital platforms are not just simply tools, but specific environments, where their users can creatively and without limitations repurpose multimodal resources alongside their linguistic repertoire. In light of this, digital spaces become unique and very necessary sites, not only for linguistic practices and communication, but also

for observing these linguistic practices and understanding how users negotiate their identities in various multimodal ways. Chapter 3 then takes a more concentrated turn and contextualizes the research by outlining Vojvodina's history, multilingual environment, and the recent challenges the Vojvodina Hungarian minority are facing (including societal and educational contexts too), alongside discussing the relatively positive attitudes that the community has held historically in relation to societal multilingualism on the territory of Vojvodina (Mandić and Rácz 2023). Chapter 4, Methodology (in part based on Kostic 2024, 2025a, and 2025b), then presents and discusses the revised research questions in detail (each accompanied by the hypotheses that have formed in the initial stages of the research), and how the qualitative and quantitative data were collected and analyzed, while it also introduces the participants of the present dissertation. A section within this chapter is also devoted to the preliminary study, which discusses the very first form of the methodology, findings, and key takeaways. It does this through presenting the exploratory preliminary study that was conducted in 2023 and whose results were published as an article, and therefore, in large part incorporates Kostic (2024). Following the order of the research questions also included above in the present chapter, Chapter 5, Results and Discussion (also in part based on Kostic 2025a, 2025b) presents the findings of the study, focusing on the digital and linguistic habits of the Vojvodina Hungarians, while also offering examples and thorough analyses of translanguaging. Chapter 6 then provides a comprehensive overview of the findings (also relying to a great extent on Kostic 2024, 2025a, 2025b), comparing the results of the preliminary study, the interviews, and the final questionnaire, and also compares those to the findings of previously published studies in the field, while also addressing limitations and implications of the research. Lastly, Chapter 7 (in part based on Kostic 2025a, and 2025b), concludes the dissertation and offers an array of directions for further research.

2. Literature Review

The present chapter provides a comprehensive review of previous research relevant to the dissertation (in large part based on Kostic 2024, 2025a, 2025b). It begins by exploring and defining concepts such as multilingualism and translanguaging, presenting the challenges and benefits associated with translanguaging in a variety of contexts, while also discussing the roles of the two concepts in minority and multilingual environments. The chapter then moves on to the third most central concept within the dissertation, Digital Nativeness (originally defined as a binary by Prensky 2001). It accounts for the history and the evolution of the terms and presents how definitions and methodological applications have changed over time. The chapter also discusses various factors influencing linguistic practices in digital spaces and foregrounds the challenges minority speakers often face in both online and offline contexts.

2.1. Bilingualism, multilingualism, and translanguaging

Three concepts which have significantly reshaped how researchers as well as the public view and understand linguistic practices in diverse linguistic communities today are those of bilingualism, multilingualism, and translanguaging. Up until the mid-20th century, before gradually becoming recognized and accepted for its benefits, bilingualism was often portrayed as a serious problem that was even believed to cause mental confusion as opposed to monolingualism (Saer 1923). However, that is not to say that these beliefs were universally present in all areas of the world. As Gal (2011) points out, linguistic nationalism in Europe in the 19th century was not strictly monolingual despite what is commonly assumed. Gal (2011) refers to the phenomenon of polyglot nationalism when discussing the linguistic situation of Hungary in the 19th century, emphasizing how during this period, elite figures showed a strong preference for multilingualism. Instead of viewing it as a threat, multilingualism was considered to be a necessity if someone wished to participate in broader international societal matters and affairs (Gal 2011). What is especially notable is that this belief was not solely shared by the elite but also by various other social classes, which often resulted in "child exchange" (*gyerekcsere* in Hungarian) to ensure that children were exposed to multiple languages and became multilingual (Gal 2011: 31). This suggests that these historical attitudes were not simply instances of isolated cases but were "part of an old and widespread ideology of differentiation in Europe" where language was used politically to "proliferate categories of value and forms of personhood linked to linguistic practice," as Gal (2012: 40) argues. Looking at the 19th century

examples, it becomes clear that multilingualism has long been recognized for its functionality and various personal, economic, and societal benefits. In the modern sense, both bilingualism (involving two languages) and multilingualism (more languages) can be defined in a variety of ways including the following: "the knowledge and use of two or more languages, the presentation of information in two languages, the need for two languages," and "the recognition of two or more languages" (Grosjean 2013: 5). Later, studies like those by Peal and Lambert (1962) in Canada comparing monolingual French and French–English bilingual children showed very paradoxical results to those of Saer's (1923), as French–English bilingual children outperformed French monolingual children on verbal and nonverbal intelligence tests. Other examples include Cummins' 1978 study that showed higher metalinguistic awareness of bilinguals, or the study of Bialystok et al. (2004) showing better cognitive flexibility among bilinguals as opposed to monolinguals.

These findings have led to more modern theoretical approaches like multicompetence (originally formulated by Cook in 1991 and later further developed by Cook 2008; Ortega and Carson 2010; Gentil 2011), which suggests that the language skills multilinguals possess are not separate for each of their languages but instead are part of a larger interconnected system in which their languages interact. Therefore, the key questions the study of multilingualism deals with are not centered around a multilingual's competence, proficiency, and the extent of these in their spoken languages, but rather how they draw on all of their knowledge from their entire linguistic repertoire (the basis of multicompetence) to communicate (Ortega and Carson 2010; Gentil 2011; Grosjean 2013), but more importantly, to communicate effectively. Multilingualism is a result of various different influences, such as "[s]poradic or prolonged language contact between populations through cohabitation, trade, intermarriage, conquest, exploration, travel, or shared interests raises the desire or need for exchange" (Franceschini 2013: 1). As Franceschini (2013) states, this frequently leads to people and entire communities becoming able to speak, write, and understand more than one language to varying degrees, often based on what function a certain language serves for them in their lives. In a similar vein, Baker (2001: 58) also highlights that, in minority settings especially, bi- or multilingualism is oftentimes unavoidable and is a necessity as "[m]inority language monolingualism is usually impracticable and unfavourable to individuals (e.g. for employment)," as these are environments where cross-cultural communication is an everyday occurrence.

Moving on to the third most central concept, translanguaging, the origins of the term itself can be dated back to the 1980s, initially appearing in research in its Welsh form, *trawsieithu*, in

Williams' (1994) work (Baker 2006, 2011; García 2009; Gwyn et al. 2012). At that time, the term mainly stood for pedagogical practice in bilingual classrooms, where the instructions in class would be given in one language and students would be required to complete tasks in the other language with the aim of strengthening their knowledge in both (Baker 2006, 2011; García 2009). As Gwyn et al. (2012: 642) point out, the use of the term was a "reaction against the historic separation of two 'monolingualisms' (Welsh and English) with a difference in prestige," as "the portrayal of Welsh and English had often been about conflict, oppression, and suppression, of English language dominance and Welsh language endangerment." In Wales particularly, thanks to the success of the revitalization of Welsh, the view of bilingualism started to shift, and by the 1960s, it was recognized to have various advantages relating to culture, employment, and, very importantly, communication (Baker 2007). As mentioned briefly above, translanguaging was often used in the classrooms deliberately as a language learning and planning strategy (Williams 1994, 1996; Baker 2001), and, as a result, a few highly potential benefits of its use in the classroom were identified. Although these were originally formulated in educational settings, these benefits can to some extent apply to situations outside of the classroom as well. One of the most frequently mentioned advantages of translanguaging that Baker (2001) highlights is that it can promote deeper understanding, as language learners in such classrooms are required to use both languages and process information in highly complex ways. Considering that the instructions take place in one language and the task is to be completed in the other, the students are prompted not only to receive information but to actively work with it and comprehend it (Baker 2001). This can, in turn, help them develop skills in their weaker languages, which can also instigate them to learn how to use their languages strategically, which is a very valuable skill to have (Baker 2001).

While translanguaging was initially a pedagogical strategy, it was later redefined as a linguistic theory by García and Li (2014: 21), who describe the phenomenon as "*new* language practices that make visible the complexity of language exchanges among people with different histories, and releases histories and understandings that had been buried within fixed language identities constrained by nation-states." Despite its negative connotations, translanguaging nowadays even appears in more official and formal settings, such as the workplace (Räisänen 2018), especially in cases of transnational work. From this perspective, Räisänen's (2018) study underscores the core ideas that Blommaert (2010) formulates in his work in relation to how linguistic practices are constantly affected and reshaped by globalization and mobility, which makes it difficult to tie linguistic practices to a single physical

location. This aligns with Pennycook's (2010: 136) argument too that language should be viewed and discussed as a context-dependent practice, i.e., an activity, which arises as a result of social, personal, spatial, and other context-specific factors that interact. In this sense, the word 'local' does not solely refer to a particular physical place, but it also refers to the "understandings that emerge from place," in which language is viewed as something that "cannot be understood according to these broad traditions, systems and dichotomies but rather must always be locally conceived" (Pennycook 2010: 136). A great example of this can be seen in Räisänen's (2018) longitudinal ethnographic study, which looked at a Finnish engineer's professional communication over 13 years and examined how his communicative practices and linguistic repertoire changed over time. As Räisänen (2018: 170) argues, although the participant in her study resided in one place physically, the work and interactions they were part of happened in transnational spaces – digitally, where individuals' "identities are (re)constructed, power, social and interpersonal relations enacted, and values generated" and these spaces make it possible for people "to reshape and reconstruct work practices, making translanguaging acceptable, legitimate, necessary, and useful." Similarly to Räisänen (2018), more and more scholars have started criticizing traditional views and approaches to languages and have been shifting their focus to exploring multilingual communities, where instead of looking at people's competence in languages, they are making sense of speakers' 'multilingual repertoires' (cf. Cenoz and Gorter 2017, 2019) as a whole interconnected system. This perspective is also taken on by Heltai and Tarsoly (2023: 32–33), who argue that the linguistic practices of marginalized communities, such as the Roma in Hungary, are best made sense of through a "unitary" repertoire because the reality is that "the Roma do not sense the boundaries in their Romani and Hungarian resources in the same way as Hungarian monolinguals do." However, at the same time, the Hungarian community and its institutions view and talk about the linguistic practices of the Roma as one that is deficient and distance themselves from those (cf. Heltai et al. 2023). These instances underscore how damaging the presence of monolingual ideologies is as well as their continued reiteration, which are encountered not only at the level of institutions but also at the level of personal interactions in some of the most mundane situations, as Heltai and Tarsoly (2023) also maintain.

These modern approaches are deeply rooted in earlier theories, like the foundational work of Gumperz (1964: 151), who argues for the interconnectedness of linguistic practices and social life. He suggests that "linguistic behavior," or 'languaging' as others, such as Jørgensen (2008) and Pennycook (2010), term it (describing it as a conscious action), can be treated as a

"form of social behavior." Later works such as Blommaert's 2010 book on superdiversity and the sociolinguistics of mobility furthered these ideas and are also echoed in more recent influential theoretical frameworks such as García and Li's 2014 on translanguaging. Based on these foundations, contemporary approaches that focus on translanguaging and multilingualism regard languages as interconnected systems instead of separate linguistic systems ('named languages') with clear boundaries (Otheguy et al. 2015; García and Otheguy 2019). Very often, Second Language Acquisition studies as well as classroom environments foreground what are institutionally defined as dominant language varieties, whereby an idealized native speaker model is promoted (cf. Cenoz and Gorter 2017, 2019; Laihonen and Heltai 2023; Heltai and Tarsoly 2023) due to a monolingual bias, a socio-political byproduct. These contemporary perspectives are intended to provide a much more nuanced understanding of a person's spoken languages, including linguistic and semiotic resources regardless of the individual's level of proficiency in those languages, instead of just viewing languages in separation or looking for weaknesses in one's repertoire. For these reasons, translanguaging as a conscious practice is promoted, as it not only allows the speaker to fully utilize all of their linguistic, pragmatic, and semiotic knowledge but also gives them an opportunity to cultivate and portray their desired identities, which is especially valued in minority settings (García and Li 2014; Cenoz and Gorter 2017, 2019). Li views translanguaging as a complex and transformative practice and defines it in the following way:

> "The act of translanguaging then is transformative in nature; it creates a social space for the multilingual language user by bringing together different dimensions of their personal history, experience and environment, their attitude, belief and ideology, their cognitive and physical capacity into one coordinated and meaningful performance, and making it into a lived experience."
>
> (Li 2011: 1223).

While translanguaging facilitates the use of minority languages and in a way challenges language hierarchies by viewing a person's spoken languages as equal regardless of their hierarchical position in a particular context (García and Li 2014; Cenoz and Gorter 2017, 2019), scholars have also been raising concerns about the potential negative effects that the promotion of translanguaging could bring about if social contexts and power dynamics between the languages and the speakers are not taken into careful consideration (Cenoz and Gorter 2017; Nguyen 2019; Bonnin and Unamuno 2021). For minority languages to survive and thrive, it is

necessary to have supportive communities and places where the use of the minority language becomes needed. This is especially important to establish in pedagogical institutions (Otheguy et al. 2015; Cenoz and Gorter 2017, 2019; García and Otheguy 2019), as they are crucial for developing speakers' motivation to use their minority languages (Cenoz and Gorter 2017, 2019). Many studies have shown that minorities can use the internet to their advantage and further strengthen their ties with their community, but also enrich and even strengthen their identities and linguistic practices in creative and novel ways, often by practicing translanguaging (Lee 2014; Lynn et al. 2015; Jongbloed-Faber et al. 2016). While translanguaging practices in general have received criticism about resulting in 'weakened' language varieties, the experiences shared by individuals from these groups are encouraging and indicate a desire to actively participate in online content creation, activities, and communication (Tagg 2015; Pauwels 2016). Belmar and Glass (2019: 5) argue that the once traditional language communities have been deeply affected by communication technology, as it "forces us to re-contextualize languages, especially […] minority languages," due to the fact that the internet should provide a space for everyone regardless of one's first language, geographical location, or social position. However, access and participation are not universally given and will often vary and depend on various personal, demographic, and socioeconomic factors (cf. Hargittai 2010; Wang et al. 2014; Helsper 2021).

Translanguaging has often been described as a linguistic practice that abandons traditional language boundaries, and instead, foregrounds the multiple ways in which multilingual speakers are able to draw on their entire linguistic repertoires for various reasons, often for the sake of more effective, individual, and also creative communication (García and Li 2014; Tankosić and Litzenberg 2021; Darvin 2022; Almashour 2024). In this sense, one recent study which captures how translanguaging effectively works in a multilingual environment is Tankosić and Litzenberg (2021), discussing Bosnia and Herzegovina's capital, Sarajevo. In the framework of a linguistic landscape study, the authors focused on three specific municipalities (Old Town, Ilidža, and the Center of the Sarajevo Canton) known for their diversity and looked at over 700 signs. This particular study found that, generally, three mutually intelligible languages of Bosnian, Serbian, and Croatian appeared interchangeably in the studied signs. As they argue, "[t]his contact zone contradicts the ideological construct of *one-community : one-language* and instead demonstrates translanguaging in practice: a community of multiple peoples who communicate via a common repertoire" (Tankosić and Litzenberg 2021: 21). Furthermore, Tankosić and Litzenberg (2021: 23) also argue that due to the flexibility of

translanguaging, the focus in such a context shifts "from languages as ideological constructs to the negotiating practices of a core in which the three native varieties [Bosnian, Croatian, Serbian] mix and mesh, blurring their differences while simultaneously displaying the true, diverse nature of the region." Their findings not only demonstrate that translanguaging is a daily and mundane phenomenon in the region but also indicate how these practices promote linguistic equality and signify a move towards inclusion (Tankosić and Litzenberg 2021).

Research has also dealt with exploring translanguaging in minority and indigenous settings, some specifically focusing on translanguaging taking place in educational contexts, often with the aim to investigate not only the potential benefits but also the drawbacks the encouragement of translanguaging might bring about. One particular paper by Duarte (2020: 243) examined official ("explicit strategies employed by teachers in order to use several languages in class") and natural translanguaging (occurring "spontaneously in classroom interaction in order to enhance subject or language-related understanding") in two European educational settings, in Luxembourg (with mainly Portuguese students and their teachers) and the Netherlands (with Arabic, Polish, Swedish, Dutch, and Frisian students). By studying the effects of official translanguaging in these two contexts, Duarte (2020) found that translanguaging can be implemented successfully in mainstream education not only as a pedagogical strategy but also as a means of creating a safe and positive environment, as the teachers' goal in these settings was to acknowledge and work with the linguistic diversity present in their classrooms. Therefore, instead of just encouraging official translanguaging for bettering content comprehension and learning, Duarte (2020) also found that it can be used for symbolic purposes, as a way to show the students that their L1s are assessed and acknowledged as a valuable resource, and also as a scaffolding tool to try and create temporary bridges between languages during instruction and hopefully in the future too.

In contrast to the findings above, other studies (Cenoz and Gorter 2017; Nguyen 2019; Bonnin and Unamuno 2021) present contrasting perspectives on how translanguaging might be a potential threat to endangered and indigenous minority languages in countries where a strong dominant monolingual ideology is in place, such as Spain (Cenoz and Gorter 2017), Vietnam (Nguyen 2019) and Argentina (Bonnin and Unamuno 2021). In connection with Vietnamese students, Nguyen (2019) discusses the effects of translanguaging on Vietnamese ethnic minority students' linguistic practices, identity construction and transformation, and demonstrates how translanguaging is taking place as a real-time 'symptom' of language shift from the students' (L1) ethnic minority language to the majority language, Vietnamese. Therefore, the

encouragement of translanguaging in this context can have the opposite of the intended effect. Instead of strengthening and supporting smaller languages by maintain the idea that they are equally important as other languages believed to be more prestigious (Li 2011; Androutsopoulos 2015; Lee 2016), the promotion of translanguaging in the Vietnamese context (Nguyen 2019) would only accelerate language shift and further endanger a language that is already vulnerable.

On the other hand, Bonnin and Unamuno (2021) argue that translanguaging is harmful because, from a theoretical perspective, this practice might contribute to erasing and ignoring the political and historical reasons why certain minoritized communities (such as the Guaraní, Wichi, and Qom) are striving to keep their languages separate and distinct from the majority language, Spanish. In this context, the indigenous communities are consciously and strategically using bilingualism to their advantage (Bonnin and Unamuno 2021). By proclaiming that they are bilinguals, it indexes their "political and linguistic identity and, as such, should be analyzed as an act of resistance" (Bonnin and Unamuno 2021: 19). Their choice to differentiate and distance their language from the majority language is rooted in their political positioning and resistance to the stigmatizing discourses that are pressuring them to assimilate (Bonnin and Unamuno 2021). In both situations there is a dominant monolingual ideology that is dismissive of linguistic diversity, and translanguaging is understood and approached from a different perspective. As they describe, the concept and promotion/practice of translanguaging can be more harmful than helpful to political agency and minority identity in the South American context from the perspective of the indigenous minoritized languages.

All of the above examples (i.e., Räisänen 2018; Nguyen 2019; Duarte 2020; Tankosić and Litzenberg 2021; Bonnin and Unamuno 2021) illustrate how the topic of bi- and multilingualism is highly complex and context-dependent, and also how translanguaging as a strategy might be both beneficial and risky. For these reasons, Cenoz and Gorter (2017) were among the first to explore the potential benefits and risks of translanguaging for minority languages, specifically focusing on the situation of the Basque language in the Basque Autonomous Community in Spain. While many describe the promotion of translingual practices as beneficial for reasons relating to language maintenance as well as language acquisition, especially when it comes to minority and/or multilingual settings (Prošić-Santovac and Radović 2018; Ćorković 2019; Duarte 2020, as translanguaging provides a much more flexible way of communication and makes it easier for people to communicate more effectively), Cenoz and

Gorter (2017, 2019) do highlight how it can also have the opposite effect if not handled properly:

> "[i]n many contexts translanguaging can be a liberation from strict purist ideologies and can be closer to the way people communicate in real life that does not involve a strict separation of languages, […]. However, […] in the context of minoritized communities, translanguaging could result in empowering speakers of the majority language rather than speakers of the minority language unless some spaces are allocated to the minority language."
>
> (Cenoz and Gorter 2019: 134).

By analyzing existing research on Basque linguistic practices (in the Arrue project) and their popularity among students (Cenoz and Gorter 2017), the authors discuss how the use of Basque in schools decreases as students grow older, despite the strong language policies that are in place. While translanguaging has been described as a successful approach in bi- and multilingual education, Cenoz and Gorter (2017: 910) warn that the "celebration of translanguaging without taking into consideration the specific characteristics of the socio-linguistic context can have a negative effect on regional minority languages." Although it is recognized how crucial it is to provide the opportunity for translanguaging, Cenoz and Gorter (2017: 910) maintain that it can only be sustainable and successful if the situations where translanguaging takes place and is encouraged are "rooted in the reality of minority languages and [allow] for breathing spaces that create the need to use these languages," seeing as most often, minority languages and minoritized communities are in vulnerable positions. They name five guiding principles ("1. Design functional breathing spaces for using the minority language; 2. Develop the need to use the minority languages through translanguaging; 3. Use emergent multilinguals' resources to reinforce all languages by developing metalinguistic awareness; 4. Enhance language awareness; 5. Link spontaneous translanguaging to pedagogical activities") that foreground the practicality of translanguaging, as it simultaneously aims to portray the equal importance of the minority language next to the majority language in a multilingual context (Cenoz and Gorter 2017: 909).

While research has often described translanguaging as a powerful tool that can be used for a number of reasons (e.g., managing social relations, using it as a pedagogical strategy, raising awareness of linguistic diversity and encouraging inclusivity and supportive discourses), research has also pointed out how equally important it is to recognize that in some

environments, the topic of bi- and multilingualism is a highly complex and difficult subject, making the encouragement and practice of translanguaging more detrimental than helpful. As Kubota (2014: 17) argues, when the primary focus of research is linguistic plurality and linguistic hybridity, "more explicit attention should be paid to issues of asymmetrical relations of power and inequalities that privilege or stigmatize individuals and groups due to their plurilingualism, cosmopolitanism, and hybridity on the one hand, or their monolingualism and monoculturalism on the other." For these reasons, doing research cannot happen without taking into account all of the possible factors (social, cultural, political, historical, and linguistic) (Kubota 2014). Yet, at the same time, it is also crucial to keep an open mind free of preconceptions, and as Cenoz and Gorter (2014, 2019) note, to place the speakers and their community at the center of the research as it is their own unique lived experience that needs to be recognized and articulated. Therefore, the ultimate goal is not to impose ideas and models on speakers but to listen to and understand their perspective: to create a space where their voices can be heard and their stories and histories can be told (Kubota 2014; Cenoz and Gorter 2014, 2019).

In conclusion, research on bilingualism, multilingualism, and translanguaging reflects the gradual shift that has taken place from viewing and talking about bi- and multilingual practices as a deficiency (Saer 1923) in the 1960s to recognizing their cognitive advantages (Peal and Lambert 1962; Cummins 1978; Baker 2001; Bialystok et al. 2004; Baker 2007), and eventually their social ones too (Li 2011; Gal 2011, 2012; García and Li 2014; Lee 2014; Lynn et al. 2015; Jongbloed-Faber et al. 2016; Cenoz and Gorter 2017; Räisänen 2018; Cenoz and Gorter 2019; Tankosić and Litzenberg 2021; Darvin 2022; Almashour 2024), all of which is especially meaningful in minority contexts (Cenoz and Gorter 2017, 2019). These changes have led to theoretical approaches like multicompetence (Cook 1991; Ortega and Carson 2010; Gentil 2011), i.e., the idea that a multilingual speaker draws from a single interconnected system, a repertoire, to effectively and strategically communicate (Grosjean 2013; Franceschini 2013), and the study of translanguaging, which embodies this concept fully. Initially used as a strategic tool in the classroom (Williams 1994, 1996), this linguistic practice became the focus of study outside of the classroom too (García and Li 2014; Prošić-Santovac and Radović 2018; Räisänen 2018; Ćorković 2019; Nguyen 2019; Duarte 2020; Tankosić and Litzenberg 2021). Translanguaging is now recognized as a highly complex, context-dependent, and spontaneous daily phenomenon that is above traditional language boundaries, and it simultaneously foregrounds the various social, individual, and functional aspects of multilingual

communication (Gardner-Chloros et al. 2005; Auer 2005; Cenoz and Gorter 2011; Li 2011; Androutsopoulos 2015; Nightingale and Safont 2019). While still viewed and used as a pedagogical strategy (see also Laihonen et al. 2025), translanguaging is also understood as a linguistic practice that is fluid, flexible, and reflecting a conscious choice, where speakers draw on their entire linguistic repertoire to achieve more effective, creative, and individual communication (García and Li 2014; Tankosić and Litzenberg 2021; Darvin 2022; Almashour 2024) both in digital and in face-to-face contexts. Although the concept has been found beneficial in minority contexts, scholars also warn how its mindless promotion in already vulnerable settings can cause more harm than good (Cenoz and Gorter 2017; Nguyen 2019; Bonnin and Unamuno 2021).

2.1.1. Language ideologies and semiotic processes

As discussed in the previous section, real life linguistic practices, whether online or in face-to-face contexts, often clash with rigid purist ideologies that demand languages to be strictly divided with clear boundaries (Cenoz and Gorter 2019). These ideologies tend to view any form of language blending as a sign of deficiency (cf. Aleksić and García 2022; Heltai and Tarsoly 2023). As Gal and Irvine (2019: 158) maintain, "[s]tandardization, race essentialisms, and European monolingual nationalisms are among the ideologies that create blockage," which is also in part what prevents people from recognizing and accepting fluid multilingual communicative practices (see the example of the Roma in Hungary in Heltai and Tarsoly's 2023 work). To understand and analyze how and why these ideologies come to be, Gal and Irvine (2019) define three semiotic processes, mainly iconization (Irvine and Gal 2000) or rhematization (in the more current work), fractal recursivity, and erasure, which all act as tools that people (actors) use in order to make sense of, and often simplify and categorize the world around them. Through various examples, Gal and Irvine (2019: 81) illustrate how speakers easily "*pivot* from one to the other category of differentiation" by taking on different positions in accordance with the individual(s) with whom they are conversing, highlighting how effortlessly and quickly one's position as well as their outward perspective, and therefore, their own ideologies can be changed "even within a single event," often driven by one's need for creating comparisons and contrast between themselves and the world around them. Gal and Irvine (2019) argue that relations between signs and the ideologies that are created with these cannot be separated from the social world:

> "Nothing is a sign in itself, but any phenomenon recognizable by participants can (potentially) be taken as a sign, guessed about, and perhaps acted on. Not only words or gestures, also acts of all kinds, events, pictures, qualities, feelings, abstract configurations, even thoughts. […] Selective attention picks out qualities, things, acts, events, practices, people, and situations that exist in the world and that, by conjecture (a guess), might be linked to each other as sign-and-object. But, noticing a possible connection is not enough. Only if the co-incidence of two phenomena is interpreted so that one is taken as a sign of the other can we talk of sign relations."
>
> (Gal and Irvine 2019: 89).

Taking the above list of potential phenomena (whether physical or abstract) into consideration, we can distinguish between three semiotic processes that are at the base of ideological constructs: iconization, fractal recursivity, and erasure (Gal and Irvine 2019). From a linguistic perspective, the process of iconization can occur when speakers directly link a linguistic feature to a person's character, treating it as a trait (Gal and Irvine 2019) instead of viewing linguistic practices as an activity. Through this process, an axis of differentiation (i.e., a qualitative comparison) is created, which has contrasting traits linked to specific social groups on each end of the axis, one of which is often presupposed to hold a higher social value than the other. On the other hand, fractal recursivity is the term that Gal and Irvine (2019) associate with a semiotic process by which a reiteration of a contrast that was created through the axis of differentiation happens. As they maintain (Gal and Irvine 2019: 20), the distinction remains the same at "whatever degree of inclusiveness or differentiation," (i.e., regardless of the level at which it is reiterated), which means that through fractal recursivity, a contrast can be scaled up as well as down, depending on the context, situation, and the position of the individual or group which is at the center of the ideological work. Lastly, erasure is the third process Gal and Irvine (2019) define, by which a certain (set of) aspect(s) of a phenomenon (e.g., specific activities, interactions, linguistic practices, types of qualities and people) come to be erased or pushed to the background in order to make another aspect more pronounced, which also means simplification. The processes Gal and Irvine (2019) define explain why it remains difficult to escape restrictive linguistic ideologies among other types. These illustrate how the external (often institutional and societal) pressure to keep languages separated and independent of each other is not based on speakers' actual linguistic practices, but rather on how ideologies simplify, categorize, and rank different groups of people.

2.2. The concept of Digital Nativeness

As mentioned above in the introductory chapter, Prensky (2001) introduced two terms in his studies, Digital Natives and Digital Immigrants, as a result of the spread of digital technology. Prensky (2001) perceived Digital Natives to be primarily determined by birthyear and tied to specific generations who grew up with technology and have grown so close to it that they cannot imagine a world without it. He differentiated Digital Natives from Digital Immigrants, who are usually described as the parents of the generations of Digital Natives. Digital Immigrants are understood to not rely primarily on digital devices for communication, work, or advice (Prensky 2001). The task of looking something up on Google might be integrated into the daily routine of a Digital Native, while it might be unfamiliar and complicated to a Digital Immigrant. As Prensky puts it, "Digital Immigrants learn – like all immigrants, some better than others – to adapt to their environment, they always retain, to some degree, their 'accent,' that is, their foot in the past" (2001: 2), which can explain why they might often find adapting to novelties difficult.

Tapscott (1998, 2009) also explores these and differentiates between accommodative and assimilative processes when discussing how Digital Immigrants and Digital Natives learn to use technology. As Tapscott (2009) argues, growing up with technology (i.e., the process of assimilation) has very different outcomes when compared to having to accommodate to this novelty, which is still evident later on in life. Tapscott (2009: 19–20) demonstrates this through a personal anecdote about an encounter he had with his own children, who were dismissive towards a segment in a television program that he appeared in as a guest to show the viewers how to browse the internet. From Tapscott's (2009: 20) perspective, this event was groundbreaking, however, to his children, the activity itself was so self-explanatory, mundane (in his son Alex's words: "Why don't we have a TV show where we can all watch you surf the fridge?") that they found it unnecessary to be explained. Based on his experience, Tapscott (2009) maintains that while younger individuals see technology as a given and entirely natural part of life, older individuals who came face-to-face with technology later on in their lives perceived it as a fascinating and unbelievable affordance, especially when compared to the technology that came before it (such as the telephone, television, and radio, etc.).

Multitasking, i.e., being "simultaneously engaged in multiple cognitively demanding tasks" (Aagaard 2015: 887) has been one of the most foregrounded characteristics of Digital Natives, frequently discussed in earlier studies (Hembrooke and Gay 2003; Tapscott 2009;

Thompson 2013; Sana et al. 2013; Calderwood et al. 2014; Kirschner and De Bruyckere 2017; Evans and Robertson 2020). During this process, an individual is doing more cognitively demanding tasks simultaneously and is believed to progress successfully in all of them. While this was initially perceived as a fascinating phenomenon, later studies discovered the true nature of multitasking and its potential detrimental effects in more severe cases on those who practiced it (Hembrooke and Gay 2003; Fried 2008; Bowman et al. 2010; Sana et al. 2013; Calderwood et al. 2014). Findings in general tended to indicate that learning and memory are negatively affected from prolonged and consistent multitasking (e.g., listening to music while studying, using a laptop during school lectures, checking one's cell phone and notifications, etc.) most often taking place while studying and doing schoolwork among younger individuals (Hembrooke and Gay 2003; Fried 2008; Bowman et al. 2010; Sana et al. 2013; Calderwood et al. 2014). These studies, done at different points in time and at different places, all resulted in similar results that continue to point out the actual reality of these instances that we describe as multitasking: it is not necessarily multitasking that is taking place but, rather, inefficient task switching that hinders the overall success and progress in all of the tasks (Kirschner and De Bruyckere 2017).

Another key aspect of Digital Nativeness is digital literacy, which became a topic of interest in research due to the skepticism around it being a given skill that develops solely from exposure to digital media and technology (Hargittai 2010; Wang et al. 2014; Šorgo et al. 2017; Evans and Robertson 2020; Reid et al. 2023). Studies that focused on digital literacy found that it does not go hand in hand with Digital Nativeness and multitasking (Šorgo et al. 2017; Evans and Robertson 2020; Reid et al. 2023), as was previously presumed. Research outcomes so far have been quite consistent and have pointed out that mere exposure to digital technologies and the web cannot automatically be equated with the possession of digital literacy (Hargittai 2010; Wang et al. 2014; Reid et al. 2023), and the belief that they do has resulted in deficits both in educational, workplace, and other contexts (e.g., in the medical field in Reid et al. 2023). This is also supported by Hargittai's 2010 findings discussed above, which showed that capabilities and skills vary even among younger individuals and are not randomly scattered nor universally present but are highly dependent on a variety of factors that are social, educational, and economic in nature. What concerns educational contexts, similar results were found by Wang et al. (2014: 654), whose results not only showed that "today's school-age learners are no more technology savvy than their teachers" but also that the teachers actually possessed more skills and experience when compared to their students. The presumed unbridgeable gap in earlier

research was also addressed by Wang et al. (2014: 564), and the following five factors were found to be the main barriers: "lack of access to technology resources, lack of time, lack of technology integration skills and strategies, and lack of support and resources of school policy." While their findings did show how deeply integrated technology use is in the lives and daily routines of their participants, the overall results indicated that most often their exposure to and use of digital technology were dependent on one's voluntariness and personal interest, and often problem-driven (Wang et al. 2014).

Similarly to Wang et al. (2014), another study by Romero et al. (2013) also found that attributes such as digital literacy, connectedness, and effective and efficient multitasking and learning, which have often been discussed in relation to Digital Nativeness, are not as clear and distinct among younger groups of people as previously assumed. Romero et al. (2013) focused on college students from a university in Spain (Open University of Catalonia, UOC) and aimed to investigate whether students who were born after the year 1982 (associated with the Net Generation) actually possessed the presumed attributes related to ICT (Information and Communication Technologies). Their results showed that there is not much difference in the digital skills and digital activities of those who were once categorized as Digital Natives and those who were not, i.e., Digital Immigrants born after 1980 and 1982 (the dividing line is also still debated) (Romero et al. 2013).

What these studies have pointed out is that it needs to be highlighted that growing up with technology does not automatically equate to digital competence and, therefore, Digital Nativeness (Hargittai and Hinnant 2008; Hargittai 2010; Romero et al. 2013; Correa 2016; Reid et al. 2023), as there might be various underlying factors (socioeconomic status, gender, education, access to digital resources) that could lead to different outcomes (Hargittai 2010; Helsper 2021). Moreover, digital inequalities among all generations, including younger people as well, could also profoundly influence their digital skills, digital engagement, as well as overall access to digital media, as was found by Helsper (2021). Due to these realizations, the digital divide from a generational perspective has been revisited multiple times (Hargittai and Hinnant 2008; Hargittai 2010; Romero et al. 2013; Wang et al. 2014).

Unlike studies on the digital divide in general, Hargittai and Hinnant's (2008: 607) study focused on "capital-enhancing" uses of the internet, as they call them, by exploring the quality and type of internet use among young adults to discover what factors are most influential. As they argue, "engaging in capital-enhancing activities is more likely to offer users opportunities

for upward mobility than certain other types of online activities (e.g., checking sports scores, reading jokes) and thus is of particular concern to our explorations of digital inequality" (Hargittai and Hinnant 2008: 607). Their findings confirmed their assumptions and found that higher levels of education and digital skills were the strongest indicators of higher engagement in "capital-enhancing" uses of the internet, which simultaneously indicates that inequalities exist on this level as well (Hargittai and Hinnant 2008: 607). Hargittai kept the focus on digitally connected young people (first-year college students) in her 2010 study too, however, the main goal was to explore the extent of students' internet skills and diversity of internet use and to see whether digital inequalities arise, and if so, where. The findings here also showed that the possession of digital skills and the diversity of internet use are not randomly distributed among the participants (Hargittai 2010). Instead, the results pointed out that those who are white or Asian American, come from more privileged backgrounds, and are male have more access to and use the internet in more informed and diverse ways (Hargittai 2010: 92), extending the previous findings in Hargittai and Hinnant (2008).

On the other hand, Helsper's (2021) study aimed to analyze in general whether socio-digital inequalities exist among European young people (ages ranged from 9 to 24) at three different levels, mainly in terms of access, outcomes, and participation. Like in the previously discussed study (Hargittai and Hinnant 2008), Helsper's (2021) results also indicated that inequalities can be found at all levels: while socio-economic factors were found to be strong predictors of access, socio-cultural and psychological factors (e.g., age, gender, and problem-solving skills) were more linked to predicting a person's participation and skills. Lastly, at the level of outcomes (i.e., positive or negative consequences of frequent use of digital technology and media), the findings suggest that positive outcomes can also be tied to education and psychological factors (Helsper 2021).

Based on various studies like those discussed above that have focused on characterizing the concept-pair originally defined by Prensky (2001), the study of Digital Nativeness has thus shifted rather prominently, as researchers have started taking alternate approaches to defining and studying it (Helsper and Eynon 2010; Teo 2013). The original definition of Digital Natives, formulated by Prensky (2001), has often been criticized for homogenizing and generalizing a set of behaviors and often strictly tying these to younger generations (born in 1980 and after), overlooking some highly determining factors such as the level of knowledge and experience with technology (Hargittai 2010; Helsper and Eynon 2010; Lee 2014), which anyone might possess, regardless of their birthyear. Both Teo (2013) and Helsper and Eynon (2010) have

focused on creating and perfecting tools to assess Digital Nativeness, but with slightly different perspectives.

To begin with, Helsper and Eynon's 2010 study in the UK centers around challenging the idea of the unbridgeable gap between Digital Natives and Digital Immigrants as well as the notion of Digital Nativeness as a solely generational phenomenon. Focusing on individuals aged 14 and over, this study looks at a variety of different factors that might be predictors of Digital Nativeness in combination with age, instead of only foregrounding an individual's age/birthyear as the sole determiner. Helsper and Eynon's original 2010 argument is that age is to be considered in combination with other potentially more influential factors than age, such as the individual's overall experience (i.e. years of contact, media richness of the household, multitasking, and internet self-efficacy) with the internet and technology, and breadth of use (i.e. how integrated the internet is in one's life and what activities are done online), while also keeping in mind the potential influence of socioeconomic factors (Tapscott 1998; Helsper 2021; Kincl and Štrach 2021). Questions relating to the breadth of use included a total of 12 activities: training/studying, e-government, entertainment, finance/e-banking, fact-checking/looking up information, current affairs/interests, travel, shopping online, social networking, diary functions, person-to-person networking, civic participation (Helsper and Eynon 2010: 507). Their findings suggest that while age does play an important role in determining the extent of one's Digital Nativeness, there is a multitude of other factors that cannot go unnoticed, these being breadth of use and experience with technology, but education and gender were also found to play a part in some cases (Helsper and Eynon 2010). Another notable finding was that the presumed digital disconnect between students and their teachers is not as unbridgeable as generally assumed. As Helsper and Eynon (2010: 516) state, their findings suggest that "adults, specifically teachers, can 'speak the same language' as their students if they want to," seeing as the starkest contrast in their findings in terms of breadth of use was most prominent after the age of 55, which is "much later than supporters of the digital native concept would have us believe and older than many educators."

Similarly to Helsper and Eynon's 2010 study but focusing on different aspects, Teo's 2013 work also involved younger individuals, specifically, students from secondary schools in New Zealand and aimed to account for their self-reported technology use through the DNAS (Digital Natives Assessment Scale) tool. The assessment scale that was used consisted of a total of 21 questions (7-point Likert-scale used in a questionnaire) that asked participants about various attributes related to Digital Natives previously discussed in the present section, and

these questions were based on four key categories: growing up with technology, being comfortable with multitasking, relying on graphics for communication, and thriving on instant gratifications and rewards. As Teo (2013) explains, the higher a students' score was, the greater their degree of Digital Nativeness. The final results revealed that these four established categories are highly indicative of Digital Nativeness, and age alone does not determine one's Digital Nativeness (Teo 2013), as was also found by Helsper and Eynon (2010). The results of their studies have immensely contributed to the study of Digital Natives and further questioned the previously imagined (Underwood 2007; Prensky 2001) unbridgeable gap between Digital Natives and Immigrants. Overall, their findings emphasize how necessary it was and continues to be to re-visit, re-evaluate, and re-define constantly evolving concepts such as Digital Nativeness, as similarly to linguistic practices, digital practices also keep changing at a fast pace.

As we could see through the studies discussed above, Digital Nativeness has become accepted as a rather flexible concept over the years, leaving behind the sole original criterion of strict generational boundaries (Hargittai 2010; Correa 2016; Reid et al. 2023), and instead, shifting the focus onto connecting it with an array of socioeconomic and individual (often personal) factors as well as experience with and exposure to technology and the internet (Tapscott 1998; Helsper and Eynon 2010). Although several studies' findings indicate a higher proficiency among teenagers, university students, and young adults when it comes to digital skills (Helsper and Eynon 2010; Akçayır et al. 2016), it also needs to be noted that this is not a universal phenomenon, as digital inequalities exist even among these groups (Helsper 2021). At the same time, others have found that there are many other factors that also play a vital role in one's Digital Nativeness, mostly individual ones such as personal interests and attitude towards technology and knowledge (Hargittai 2010; Jarrahi and Eshraghi 2019), as well as one's highest level of education and sometimes even gender (Helsper and Eynon 2010; Correa 2016). Jarrahi and Eshraghi (2019) also found that Digital Natives and Digital Immigrants approach personal and professional matters quite differently. While Digital Natives easily turn to social networks in both cases, Digital Immigrants were found to prefer more traditional and face-to-face communication and tend to view social networks as professional tools (Jarrahi and Eshraghi 2019).

The paired concepts of Digital Natives and Digital Immigrants, initially coined by Prensky (2001) at the beginning of the 21st century, have been the topic of interest among scholars in various fields for well over 20 years now (Hembrooke and Gay 2003; Fried 2008;

Hargittai and Hinnant 2008; Hargittai 2010; Bowman et al. 2010; Helsper and Eynon 2010; Teo 2013; Sana et al. 2013; Wang et al. 2014; Calderwood et al. 2014; Šorgo et al. 2017; Helsper 2021; Reid et al. 2023), but are gradually being left behind. While in the initial stages the two concepts were contrasted on a generational basis, such a basis for the juxtaposition was challenged and disproved soon after by researchers around the world. Their findings demonstrated that birthyear alone cannot determine an individual's digital competence, emphasizing the presence of a multitude of other inter-related educational, social, and economic factors that need to be considered when using these concepts in a scholarly manner (Helsper and Eynon 2010; Teo 2013; Helsper 2021; Kincl and Štrach 2021). At one point, the belief that exposure alone could guarantee digital literacy was also proven incorrect (Hargittai and Hinnant 2008; Hargittai 2010; Romero et al. 2013; Wang et al. 2014; Correa 2016; Šorgo et al. 2017; Evans and Robertson 2020; Reid et al. 2023). Findings also often revealed that even within specific age groups and socio-economic strata, there are differences and inequalities (Hargittai and Hinnant 2008; Hargittai 2010; Wang et al. 2014; Helsper 2021). Studies showed that there are inconsistencies within the attributes themselves too, such as multitasking and digital literacy, which were initially believed to be inherent and resulting in productivity (Hargittai 2010; Wang et al. 2014; Šorgo et al. 2017; Evans and Robertson 2020; Reid et al. 2023). Later the true, detrimental nature of multitasking was also revealed and studies often identified it as inefficient task switching, which affected learning, cognitive processes, and overall progress solely negatively (Hembrooke and Gay 2003; Fried 2008; Bowman et al. 2010; Sana et al. 2013; Calderwood et al. 2014; Kirschner and De Bruyckere 2017). In light of these findings, the present dissertation also aims to explore Digital Nativeness among various age groups (instead of just focusing on younger generations) by keeping in mind the potential inequalities and the idea that Digital Nativeness cannot be generalized as a universal and all-encompassing experience and phenomenon as previous research has also concluded (Hargittai and Hinnant 2008; Wang et al. 2014; Helsper 2021; Šorgo et al. 2017; Evans and Robertson 2020; Reid et al. 2023). From this perspective, Digital Nativeness is understood not as a rigid and generation-based binary, but as a fluid and very context dependent phenomenon that is simultaneously shaped by the very personal realities of the individuals in question (cf. Wang et al. 2014).

2.3. Language, participation, power, and identity in the digital age

Due to the omnipresence of the internet and the widespread use of online communication (Crystal 2006; Eble 2009; Sayers 2014; Thomason 2001), research investigating the influence of digital media on linguistic practices is expanding. The internet has become an integral part of people's lives, facilitating extensive language contact as people from diverse linguistic backgrounds interact online (Tagg et al. 2017; Green 2016). With social media, interactions transcend geographical boundaries and easily connect people from all over the world resulting in increased language contact (Tagg et al. 2017), often to the extent of introducing new linguistic practices and norms (Gershon 2010; Green 2016). Therefore, in today's world, the digital presence and active use of a language online have become so vital that it is now a fundamental way to measure its long-term survival and health (Kornai 2013). As Kornai (2013: 1) argues, the threat to the world's languages is highly underestimated, since less than 5% of them are believed to "ascend to the digital realm." While digital spaces were initially only available to large organizations, eventually with the availability and spread of digital devices, digital spaces slowly became accessible by the public, simultaneously making it possible for digital language presence to spread as well (Kornai 2013). The degree of active digital communication and the digital presence of a language is first and foremost visible through Wikipedia, which "lets everyone pursue a goal, summarizing human knowledge, that many find not just attractive, but in fact instrumental for establishing their language and culture in the digital realm," as Kornai (2013: 3) states. Very often, the lack of a language's and community's digital presence stems from digital inequality, i.e., the digital divide, as access to technology and even the internet is still not available everywhere, making it impossible for certain languages and communities to become digitized and digitally functional (Kornai 2013). Aside from the size of the community, Kornai (2013) also highlights how major of a factor a language's prestige is when it comes to the survival and vitality of a language in the offline world, as this is a factor that also majorly impacts the degree of its digital presence.

2.3.1. Identity construction and linguistic innovation in digital spaces

While sociolinguistic studies have traditionally focused primarily on the spoken forms of languages, scholars have also been increasingly interested in researching computer-mediated communication (CMC) – as digital communication was originally termed (Merchant 2001; Reyes 2005; Danet and Herring 2007; Koutsogiannis and Mitsikopoulou 2007;

Androutsopoulos 2007, 2013; Takahashi 2014; Androutsopoulos 2015). Generally, a common finding across these studies is that multilingual practices and language mixing in digital spaces are not randomly occurring but are functional, meaningful, context-dependent, and context-sensitive. Rather than suggesting linguistic deficiency, these voluntary practices reflect strategic and skilled use of bi- and multilingual individuals' linguistic resources (Danet and Herring 2007; Koutsogiannis and Mitsikopoulou 2007; Androutsopoulos 2007, 2013, 2015). While some of the studies (Merchant 2001; Reyes 2005) in the coming section do not involve bi- or multilingual speakers, they nevertheless highlight the significance of their changing linguistic practices in the global context. In light of this, the following studies represent how digital communication has moved from simply exploring the (at the time) novel affordances of digital devices and being present digitally (Merchant 2001) all the way to the very same platform becoming a space where identities are negotiated (Androutsopoulos 2015; Koutsogiannis and Mitsikopoulou 2007), and where linguistic practices of the local and the broader meet.

To begin with, Merchant's 2001 study focused on how six teenage girls in the North of England communicated online in chatrooms, email, and other websites. With the help of interviews and observational data, the study aimed to analyze how these teenagers navigated digital communication, and how they used language online. Merchant's 2001 findings suggest that because of the fast-paced change in digital technology, a lot of linguistic innovation is taking place in online conversations, which simultaneously portrays the constantly changing nature of digital technology. As Merchant (2001) argues, the participants are very much involved in this ongoing linguistic innovation, by which they are crossing traditional boundaries of social groups and culture. Their "rapid written conversations" (Merchant 2001: 293) were found to be of hybrid nature, blending features of face-to-face talk with multimodal and semiotic resources (abbreviations, emoticons/emojis, and other visual affordances of digital media and technology), most often driven by their need for quick and efficient communication. Merchant (2001: 293) concludes that these innovative linguistic practices not only allow teenagers to expand their social circles and experiment socially online – all of which highly contributes to them developing "sophisticated and marketable skills" – but they also serve to critique existing linguistic hierarchies. Furthermore, these practices foreground digital communication as a multimodal space where these novelties in linguistic and semiotic practices actively challenge both traditional forms of communication and established linguistic norms. This latter challenge is aimed at linguistic conservatism (where institutions like the school and the state impose a legitimate form of a language – a standard – which in turn acts as a means to

devalue non-standard varieties leading to the stigmatization of those) and linguistic capital (i.e., language as wealth – highlighting how inseparable language is from the broader context of power relations in society, where competence in the legitimate/standard variety of a language is understood to be profitable and grants power to the speaker) (Bourdieu 1992).

Building on the idea of digitally driven linguistic innovation that Merchant (2001) demonstrated through the various resources and examples that teenage girls use in digital spaces, more recent research, such as that of Androutsopoulos' (2015), suggests that these changes are not simply stylistic, but are actually pointing towards an ongoing shift in how we practice, view, and understand language. These more nuanced perspectives and theories (e.g., translanguaging and multilingualism in García and Li's 2014 work) do not reiterate the rigid and separatist understandings of languages, but rather foreground 'languaging' (Jørgensen 2008; Pennycook 2010) as a fluid and individual practice that is especially observable in digital spaces where multiple languages, cultures, and ideologies intersect (cf. Androutsopoulos 2015) but also clash (Koutsogiannis and Mitsikopoulou 2007). In a later work, Androutsopoulos (2015) proposed the concept of 'networked multilingualism' (referring to being in the digital network and being connected digitally) and demonstrated it through observing and interviewing a small group of Greek L1 high school students in Northern Germany. The study focused on how students tend to communicate on Facebook, what their language preferences are, and what their linguistic repertoires consist of. Androutsopoulos (2015) emphasizes the importance of social network sites in the modern digital world, and how this arena promotes and gives way to multilingual practices, and by doing so, shifts the focus away from linguistic systems over to the actual linguistic practices. New ways of communicating arise that are often shaped and determined by the available tools (a keyboard and a mouse), with the user inducing changes in orthography, punctuation, and spelling (Androutsopoulos 2015). Based on these findings, Androutsopoulos (2015) concludes that the Greek L1 high school students' language choices are heavily dependent on context and are individualized, making language choices rather unpredictable in the virtual space in the case of the participants of his study.

While Merchant (2001) and Androutsopoulos (2015) examine how digital spaces contribute to linguistic innovation, it is just as important to examine how these innovations are being used strategically as tools for expressing social standing and negotiating identities online. For these reasons, research has also focused on exploring how and why young people communicate online the way they do. Specifically focusing on the use of slang, Reyes (2005) explores a group of Southeast Asian American teenagers who integrate and also appropriate the

African American slang expressions *aite* ‘all right’ and *na mean* ‘do you know what I mean?’. With the help of interviews, recordings, and field notes, Reyes (2005) aimed to uncover the reasons the group of Southeast Asian American teenagers often choose to identify with and embrace African American cultures, communities, lifestyle choices, social practices, and even linguistic practices rather than white mainstream ones in their society. As Reyes (2005) argues, the findings suggest that the main reasons this integration takes place are to set social boundaries, express group belonging, and to signal that their linguistic practices are something to be proud of. Through their linguistic choices, the Southeast Asian American teenagers are establishing their own urban youth identities. On the topic of youth and social media still, Takahashi (2014) analyzed the relationship between Japanese youth and social media, with the aim to understand the workings of constant connectivity and to see how their own cultural values interact with social media practices. With the help of interviews and ethnographic observations, Takahashi (2014) collected information on the online activities of young people both on worldwide and local Japanese websites. The findings suggest that communication patterns are changing, and technology’s influence is certainly palpable. Simultaneously, the two cultural concepts of *uchi* ‘belonging’ and *kuuki* ‘the atmosphere of a situation’ are being transferred to online communities too, and each social network (Facebook, Twitter/X, Line, Mixi) has its own function depending on the type of bonds and the type of communication the users wish to carry out.

The connection between language, identity, and belonging is even more prominent in diasporic communities (Androutsopoulos 2007), where digital spaces become even more indispensable as they allow community members to maintain their languages and also their social and cultural ties, regardless of where they are located. This is illustrated by Androutsopoulos (2007), who examined German-based diasporic digital forums for Persian, Greek, and Indian internet users, and found that while German was the primary language the ethnic groups used, they tended to switch to their home languages for wishes, formulaic expressions, and greetings, as well as in cases where they wished to display their commitment to their ethnic identity.

However, there are also cases where there is tension between linguistic practices and the ways in which they are perceived by the wider public: while some may view fluid linguistic practices as empowering and creative ways of self-expression (Leppänen 2007), others might understand it as a threat to their language (Koutsogiannis and Mitsikopoulou 2007). One particular study which focused on the linguistic practices of youth was carried out with the

combination of discourse analytical and sociolinguistic methodologies, in which Leppänen (2007) analyzes the linguistic practices of teenagers in digital spaces, specifically focusing on Finnish young people, who frequently use English in combination with Finnish both in spoken and written form. The central aim of the study was to uncover the specific social, cultural, and identity-related purposes that English tends to fulfill for these young people, and how it is used in combination with Finnish on digital platforms. The analyzed data encompassed four distinct contexts such as websites, blogs, and fanfiction often created by local youth, while gaming sessions and music were also examined. What the findings showed was that the linguistic practices of the participants serve local, social, and cultural purposes alike, and the way English is used by the teenagers reflects an ongoing social and cultural change, highlighting the teenagers' desire to connect with the wider globalized world (Leppänen 2007). Unlike in many other contexts (such as the Greek context studied by Koutsogiannis and Mitsikopoulou 2007 discussed below), English is not perceived as a threat to the Finnish language and culture but rather as an additional and empowering means of self-expression and a resource for constructing identity and community that is particularly important in the adolescent years of the Finnish participants (Leppänen 2007).

Lastly, Koutsogiannis and Mitsikopoulou's (2007: 144) study was conducted with the aim to explore the social and ideological phenomenon of "Greeklish", a mixture of Greek and English in the Latin alphabet to write Greek (especially among young generations), in Greek press – mainly newspapers (morning and weekly newspapers, and financial press, among others) written not only by journalists and laypeople, but also by professors, philologists, linguists, and other experts in various fields. Based on their findings, the analyzed content suggested three reoccurring trends in these: not only was Greeklish talked about as a serious threat that should be resisted, but it was also dismissed as either a non-existent or a temporary phenomenon by the press. In contrast to Leppänen's (2007) findings, the findings of Koutsogiannis and Mitsikopoulou (2007) indicate that the situation of Greeklish is not only representative of a technological but also a political and ideological conflict, where the Greek alphabet is much more symbolic and tied to national identity than it might seem (Koutsogiannis and Mitsikopoulou 2007). Koutsogiannis and Mitsikopoulou (2007) conclude that while both English and the internet are seen as a threat to the Greek language and identity by many Greeks, the internet should actually be regarded as a valuable opportunity instead of a threat, as it is a new medium that is limitless and can ensure linguistic diversity if used strategically, where the promotion of the Greek language and culture could thrive.

Based on the above studies (Merchant 2001; Leppänen 2007; Koutsogiannis and Mitsikopoulou 2007; Takahashi 2014; Androutsopoulos 2015), as well the foundational works of Gumperz (1964) on the interconnectedness of linguistic practices and social life and Blommaert (2010) on superdiversity, it is safe to assume that linguistic practices, especially those taking place digitally, have an abundance of factors affecting them.

Blommaert's 2010 work on mobility and superdiversity highlights the possibility of an infinite variety of contexts, suggesting that every person's linguistic and cultural reality is unique and very heavily dependent on their specific environment. In this sense, it is simply not sufficient to observe these practices solely based on the demographic backgrounds of participants, without taking into consideration the potential social, personal, and cultural factors that might be at play (similarly to how Lee 2014 approaches her participants' digital-linguistic life stories). Many of the factors elaborated on above can easily vary from person to person depending on their individual lived experiences and complex social and linguistic contexts, which is something that also extends to digital practices (cf. Hargittai 2010; Wang et al. 2014; Reid et al. 2023). Building on these observations of how internet users repurpose various multimodal and semiotic resources, recent research has increasingly emphasized how communication digitally has become much more complex (Jiang and Luk 2016; Dahlström 2021; Jiang 2023; Huang 2026). Language now only constitutes "one part of the multilingual and multimodal resources that have been utilised in the communicative repertoires of contemporary youths" as Jiang (2023: 20) argues, however, this also occurs more and more frequently among other generations of internet users that Gu et al. (2026: 2) refer to as "social actors – individuals, communities, and institutions," who rely on these resources in digital interactions. Various studies have thus emphasized how content creation and interactions online have increasingly become manifold and inclusive of various semiotic modes such as video and photo journals, photography, audio, and even presentations among others, which highlights how necessary and useful these tools are alongside language to help users express themselves, and get messages across the most efficiently (cf. Dahlström 2021; Jiang 2023; Huang 2026; Gu et al. 2026). However, research also warns against the potential biases and inequalities that may arise in these digital contexts, as the very same resource(s) that might be advantageous in one case, might also be disadvantageous in another, as resources can be used to spread misinformation, but they can also be used for the marginalization of certain groups that are already at a disposition (Gu et al. 2026).

2.3.2. Language vitality in the digital age

As Kornai (2013: 1) states, "a language increasingly acquires digital functions and prestige as its speakers increasingly acquire digital skills." A very decisive factor in this process is the digital vitality of a language, which heavily depends on how frequently, how freely, and how well its speakers are able to use their language(s) in digital spaces, however, for this to happen, it also needs to be highlighted that it all depends on how developed their digital skills are at the level of their entire community (Kornai 2013). Additional factors such as age, occupation, and personal interests are also important. Similarly to face-to-face situations, online interactions also often require the use of specific languages to perform particular roles, depending on the communicational or personal goals of the individual. These roles could be influenced by familial relations (where people use the languages they are used to using within the closer family) (Grosjean 1982, 2010), or outside factors, where using English in online forums instead of their native language is preferred to fit in more with international wider audiences and communities (Durham 2007; Lee 2014), or even avoiding the use of English out of fear of receiving judgment from other online users (Lee 2014). In minority communities, some of the same reasons have been found to influence language choices and even linguistic practices online (Kelly-Holmes 2004; Durham 2007; Lee 2014; Lackaff and Moner 2016; Lee 2016; Cunliffe 2019).

The vast majority of studies in CMC have focused on the digital and digital linguistic habits of younger groups (Merchant 2001; Reyes 2005; Chen 2007; Spilioti 2009; Takahashi 2014; Lee 2016), leaving the older demographic under-researched. In combination with minority speaker contexts, this becomes an even more intriguing area of research (Lee 2016) for generational, social, cultural, and linguistic reasons. Studies focusing on the digital linguistic habits of younger groups generally found that language mixing is a common and deliberate digital linguistic practice among younger generations (Kelly-Holmes 2004; Chen 2007; Spilioti 2009; Lee 2014; Lee 2016), as it often takes place due to one's desire to signal a belonging to or a familiarity with a certain community, group, or culture. An example of this can be seen in Chen's 2007 study on Taiwanese college students who regularly and intentionally mix English and Mandarin Chinese online to convey various meanings and emotions, and to construct individual or group identities through language choices. Alphabet choices also function similarly in Spilioti's 2009 study, where young Greeks (aged between 15 and 25) deliberately switch between the Greek and Latin alphabets with the aim of showing their affiliation with different audiences and global popular culture.

Language choice has also been researched in detail over the years (Bornman 2003; Kelly-Holmes 2004; Durham 2007; Chen 2007; Spilioti 2009; Li 2011; Galácz and Ságvári 2013; O'Carroll 2013; Molyneaux et al. 2014; Lee 2014; Androutsopoulos 2015; Lackaff and Moner 2016; Lee 2016; Cunliffe 2019; Belmar and Glass 2019; Aleksić and García 2022; Mandić and Rácz 2023). As Grosjean (1982: 117) argues, language is not only an "instrument of communication" but also a symbol of identity and solidarity, and very often, there is a multitude of social factors that influence an individual's language choices (Grosjean 1982, 2010). Grosjean (1982, 2010) talks about four interacting factors that often tend to influence the language choices of individuals who speak more than one language. These four categories Grosjean (1982, 2010) establishes are participants (language proficiency, history of interaction, attitude towards a language, power relations, and age), situation (location, formality of situation, and the presence of monolinguals), the content of discourse – i.e., the topic, and function of the interaction (to achieve a specific goal such as raise status, and create distance or the opposite). As Haugen (1956: 95–96) argues, language attitudes are inevitable in environments where languages are in contact, which also means that there are always going to be "certain prevalent attitudes of favor or disfavor towards the languages involved," and as a result, their presence not only has a tendency to affect the "psychology of the individuals and […] their use of the languages" but it also translates to "inter-group judgments and stereotypes" aimed at larger groups of speakers of the languages in question. This can be observed in various studies done around the globe (Kelly-Holmes 2004; Androutsopoulos 2007; Vaisman 2011; Tagg and Seargeant 2012; Lee 2014), however, there have also been cases where, due to the desire to go against socially perceived power relations between languages, speakers of less advantaged languages consciously chose to share content and communicate in their first language instead of English.

One such study was conducted by Kelly-Holmes (2004), which looked at students' internet practices from multiple countries (Italy, Macedonia, Indonesia, Poland, France, and Tanzania), and discovered that the choice to use English over one's first language on the internet was not as prevalent as one would think, considering the overwhelming English content present in digital spaces and its social and prestigious position. The few cases in which English was chosen over the L1 included situations where the respondents were from countries that did not have the financial means to establish and maintain websites in their own respective majority languages (for example, Macedonia, just recently becoming independent at the time). In combination with language choice, identity is an additional question to be considered when it comes to digital

media consumption and content creation (Lee 2014). Identity is understood to be fluid and "like masks that can be worn and taken off in different contexts of social interaction" (Lee 2014: 91, commenting on Goffman 1990[1959]) whether that is online or offline. Very often, these "masks" are worn on purpose and with specific aims behind them, such as emphasizing inclusivity, showing support, or even strengthening one's community online when it might not be possible to do so in person (O'Carroll 2013; Lee 2014; Molyneaux et al. 2014). What we can establish from the studies mentioned above is that, with the help of various textual, linguistic, typographical, and visual resources and tools, users can creatively convey personalized messages and shape their own identities the way they wish to in the digital space (Kelly-Holmes 2004; Lee 2014). Overall, what these studies have also shown is that active online participation, language choice, online communities, and websites one chooses to visit and be a part of are all closely related to identity. The two studies discussed above by Lee (2014) and Kelly-Holmes (2004) illustrate just how deeply interwoven these aspects are with one another.

Since more prestigious and widely spoken languages like English, French, and German continue to dominate online platforms, there is a risk that lesser-spoken languages may become further marginalized (Durham 2003; Kelly-Holmes 2004; Sperlich 2005). As Lee (2016) notes, researching multilingual practices online requires the consideration of broader social, financial, and linguistic factors. Additionally, in order to gain better understanding of digital linguistic diversity, researchers should also strive to focus on analyzing both the resources people use online and their CMC exchanges across a variety of online platforms (Lee 2016). Lee illustrates how this can be done in her 2014 study where she describes the techno-biography as a tool that is able to capture exactly this. As Lee puts it, techno-biography is a "life story in relation to technologies" (2014: 94), where participants tell their own story the way they experience technology and language online in the present as well as the past (Ching and Vigdor 2005; Lee 2014). In a 2014 study, through techno-biographical interviews and recordings of social media browsing done by her participants, Lee (2014) examined the situated online language practices and online identities of Cantonese and English bilingual undergraduates in Hong Kong. The study consisted of two phases: first, an online questionnaire was shared with students, from which the participants could be selected for the second phase, which involved a 30-minute screen recording session where the participants were asked to do what they normally would online, and then they would revisit this session to discuss their activities and choices during the interview. Instead of just interviewing the participants, Lee (2014) adopted an ethnographic

approach and combined a questionnaire and one-on-one interviews with screen recordings of the participants' digital activities (such as browsing and interacting digitally) prior to the interview sessions to gain a much more in-depth and nuanced insight into their digital and linguistic practices. This way, Lee (2014) was able to account for the bilingual participants' technology use and participation in the present day as well as the past based on the life stories of the participants. By focusing on habits related to internet and daily technology use, she uncovered how her participants utilized many resources online to convey personalized messages, posts, and content which all played a major part in identity play.

The study found that in a lot of cases, the participants' digital language choices as well as their attitudes towards their languages were reflective of those in face-to-face contexts, and they were also very often consciously chosen to fit the social role they were performing (e.g., student, friend, family member) (Lee 2014). They often engage in multimodal identity play through a variety of digital activities, such as updating and customizing their profiles on Facebook, and strategically using semiotic resources like photos to visually represent themselves, instead of only relying on language and text. Some of the participants even had two profiles, such as Tony, indicating that he separated his professional and personal life, which was also reflected in his deliberate language choices when addressing his target audience. As Lee (2014) concludes, although there ought to be overlaps, people's experience with technology is still very individual, which is also true for linguistic habits that heavily depend on not only context but also on the audience one wishes to address and communicate with.

Apart from status updating, commenting, post creation, sharing photos, and creating a profile online (Kelly-Holmes 2004; Lee 2014), the availability of all sorts of linguistic and technological resources (keyboards, different input languages, creative spelling, mixing styles and spoken languages, special characters and symbols from other languages one might not even speak) are key elements when it comes to building and expressing one's identity online (Androutsopoulos 2007; Vaisman 2011; Tagg and Seargeant 2012; Lee 2014). Due to the situatedness of identity, studying the identity practices and lived experiences of internet users online needs to be done in a context-conscious manner (Lee 2014). While Vaisman (2011: 180) looks at Israeli teenage girls' digital linguistic practices on Hebrew blogs, specifically how they replace Hebrew characters with ASCII (American Standard Code for Information Interchange) signs that resemble Hebrew script the most to perform their "Fakatsa" (a girls-only community, i.e., a subculture) identity, Tagg and Seargeant (2012) analyze the linguistic practices of Thais, focusing on code- and script-switching between English and Thai on social media platforms.

The findings of both studies suggest how internet users are strategically and creatively using and manipulating language and scripts visually, and in both cases, this creative manipulation of language is understood to be a conscious, goal-driven, and personalized practice that is an important part of performing and constructing the speakers' desired identities in their respective digital environments (Vaisman 2011; Tagg and Seargeant 2012).

Recognizing how fundamental it is for languages to gain digital presence, a factor that Kornai (2013) understands to be vital for the long-term survival of a language, the present section has presented and explored how digital spaces have become crucial for the vitality and the survival of a language in the digital age. Research on computer-mediated communication (CMC) has revealed that multilingual practices online are not only omnipresent (regardless of the languages, communities, and locations in question) but are also examples of highly functional and strategic linguistic practices, which reflect conscious and goal-driven linguistic choices rather than deficiency (Merchant 2001; Kelly-Holmes 2004; Androutsopoulos 2007; Vaisman 2011; Tagg and Seargeant 2012; Lee 2014; Androutsopoulos 2015). These studies have highlighted how users tend to strategically manipulate language and script along with other multimodal and semiotic affordances of digital media (memes, sounds, etc.) to personalize and construct their online identities, and establish membership and affiliation with certain groups, such as in the case of the Israeli girls' use of ASCII signs to represent Hebrew as a means of performing their "Fakatsa" identity (Vaisman 2011: 180), or the young Greeks who purposefully switch between alphabets to show their affiliation with global popular culture (Spilioti 2009). Ultimately, these studies have also drawn the attention to the situatedness of online language choices, which are highly dependent on context, audience, and social factors, as is the case in face-to-face interactions in general (Grosjean 1982, 2010).

2.3.3. The challenges of digital media from minority speakers' perspective

Very often, technology and digital spaces are not equipped with the necessary tools for certain languages and communities around the world, which can result in the lack of "written representation of minority or migrant languages" (Androutsopoulos 2015: 188). These shortcomings have been found to weaken speakers' desire for active online participation. In some cases, the internet user might need to resort to using a more widely spoken language over their own first language (Kelly-Holmes 2004; Lee 2014), or it might even discourage them from creating content altogether and, instead, turning them into passive consumers. Androutsopoulos

(2015), too, emphasizes that while digital media does establish an array of new opportunities for minority individuals in documenting their languages, there are still obstacles such as linguistic insecurity and fear of discrimination that may discourage them from using their vernaculars online in writing. As a result, they might opt for communicating in other (often more widely spoken) languages online, which can especially be true for minorities. While Cunliffe (2007) argues that minority individuals should not be seen as victims of the digitized world, very often it is the lack of digital skills, internet availability, tools (e.g. keyboards, orthography, and input language), and supportive community that create the obstacles and lead to discouragement from active participation online. Knowing how to navigate the internet and technology in itself can also become frustrating. Fortunately, many new tools and resources keep arising and becoming available that users can repurpose for their own needs. Experienced and well-networked users, who Androutsopoulos (2015) refers to as networked actors, can adapt a variety of multimodal (e.g., linguistic, orthographic, and visual) resources that they encounter online to suit their own communication styles or to fit within specific online communities or contexts. These digital tools have also been researched by Vaisman (2011), who uncovered that already around the 2010s, younger generations were making use of any resources (e.g. scripts, punctuation, and anything visual) available to them in order to create personalized and creative pieces of text online.

The term 'networked multilingualism' becomes prevalent here, which Androutsopoulos defines as follows:

> "[a] cover term for multilingual practices that are shaped by two interrelated processes: *being networked*, i.e. digitally connected to other individuals and groups, and *being in the network*, i.e. embedded in the global digital mediascape of the web. Networked multilingualism encompasses everything language users do with the entire range of linguistic resources within three sets of constraints: mediation of written language by keyboard-and-screen technologies […], access to network resources ('Network resources'), and orientation to networked audiences ('Networked audiences')."
>
> (Androutsopoulos 2015: 188).

While it does take some time, patience, and practice for older generations and some minorities to adapt to this fast-paced virtual realm, taking advantage of social media (instead of traditional, more static websites, according to Cunliffe 2019) and other platforms like YouTube are essential as they make sharing videos and audio recordings possible to anyone anywhere with an

established internet connection and access to devices (Tagg 2015). Familiarizing oneself with digital media and practicing digital skills becomes a very valuable tool in making connections online and becoming networked (Androutsopoulos 2015). Multilingualism becomes an asset in the digital world, where using one's known and spoken languages in combination with other languages in creative ways can strengthen and support linguistic diversity and make visible minority languages in the process (Jones and Uribe-Jongbloed 2013; Soria et al. 2016). Additionally, with the availability of machine translators accessible on the internet, people can also write in languages they may not even speak. Platforms like YouTube that do not necessarily require written text can be very useful as they mainly work on the basis of video and sound. These tools are especially resourceful for minority individuals who might be lacking direct contact with their community, heritage, and first language and wish to maintain or revive it (Galla 2009; Jones and Uribe-Jongbloed 2013; Tagg 2015; Stern 2017; Cunliffe 2019). Although lack of access to devices and the internet is still prevalent in many countries, the idea would be to inspire more and more minorities to begin actively participating, creating digital materials, and connecting with their origins or at least with others who share similar experiences to establish a support system that they might not have in person (Cunliffe 2007; Cormack 2013; Tagg 2015). Cunliffe (2007: 147) further argues that we should recognize the potential minorities hold in becoming "active shapers" of the internet and technology, who could also potentially repurpose already existing digital tools to fit their own needs locally, culturally, and linguistically, as long as they have the means and knowledge to do so. While the internet does have its downsides, it nevertheless has provided an array of opportunities, and a limitless platform where minority languages can become more noticeable to the world (Cunliffe and Herring 2005; Danet and Herring 2007; Lee 2016) and the possibility of these spaces aiding language maintenance becomes far from unimaginable as well.

Efforts of all kinds have been made online from revitalizing endangered languages with the help and creation of online visual and textual resources (like the Yami in Taiwan, discussed in Rau and Yang 2009) to individuals from minorities creating their own Facebook groups for communicative and community building purposes (Paricio-Martín and Martínez-Cortés 2010; Cunliffe 2019). In some cases, the growing presence of content in more widely spoken languages (especially English) can simultaneously bring about the opposite effect in the audience, where the sense of national, cultural, local, and linguistic identity becomes more strengthened and could encourage more participation in both local and virtual settings both in minority and in some cases, majority communities whose digital presence is very faint or even

non-existent (Bornman 2003; Kelly-Holmes 2004; Deumert and Masinyana 2008; Androutsopoulos 2015; Belmar and Glass 2019). For one, Deumert and Masinyana (2008) analyzed language choices of isiXhosa-English bilingual users in South Africa when sending text messages and found that English was often the preferred language, reflecting its dominance globally on the internet and digital media. However, despite this preference, the findings also showed that both languages have a designated place digitally in their messaging practices. While English messages adopted the "global SMS standard, characterized by the use of well-established spelling abbreviations, phonological approximations, non-standard spellings (often reflecting stylized AAVE pronunciations) […] and paralinguistic restitutions" (Deumert and Masinyana 2008: 140), their isiXhosa messages strictly avoided these features. Ultimately, Deumert and Masinyana's 2008 study has demonstrated that the participants are able to consciously separate the two, and how a local language variety can actively resist language shift while simultaneously embracing the new medium of digital communication and the use of English successfully.

Studies have also found how digitization, the internet, and globalization can pose both challenges and opportunities for minority and marginalized communities around the world (Moring 2013; Ferré-Pavía et al. 2018; Belmar and Glass 2019; Valijärvi and Kahn 2023). The study by Ferré-Pavía et al. (2018) analyzed the digitization process of minority language media in 10 European minority language communities, including Catalan, Basque, and Corsican among others. Based on their findings, more and more media organizations are gaining digital presence, which also indicates that minority languages have started gaining digital visibility and are actively starting to appear and use social media platforms (Ferré-Pavía et al. 2018). By comparing data from 2009 to data from 2016, Ferré-Pavía et al. (2018) found that 9 out of 10 news organizations had achieved some form of digital presence. However, the authors do note that this is not happening at the same rate and equally effectively in all cases, as a "niche of traditional media" remains outside of the online world (Ferré-Pavía et al. 2018: 1065). Similarly, Belmar and Glass (2019: 3) explore the role of virtual communities and social media as "breathing spaces" for minority languages. As they argue, digital presence has become an essential part of language revitalization and maintenance, as the hybrid nature of digital communication aligns seamlessly with translanguaging. For this reason, Belmar and Glass (2019) contend that digital spaces offer a much needed flexible and non-judgmental environment for minority language speakers where their languages can continue to be used, spread, and maintained in various ways.

In contrast, Moring (2013) offers a different perspective on the digital presence of minority languages. By focusing on the challenges that arise from the new digital media market (commercial and public service companies, social media sites and apps, etc.), Moring (2013) found that the media landscape tends to further marginalize languages digitally that are perceived to be less prestigious. As Moring (2013) argues, due to the structure of the digital market, which has a tendency to favor languages that are socially perceived to be more dominant and prestigious than less widely spoken languages for the sake of reaching wider audiences globally, minority languages become neglected in digital spaces as well. Due to this asymmetric position, they often lack content in their own language, have fewer available services, and also have little investment from larger platforms when compared to other, more prestigious languages such as English, for example (Moring 2013). As a solution, Moring (2013) argues that there is need for active measures and more rigorous regulation to involve and embrace more minority languages in this area. While new media are usually understood to be "hastening the destruction of minority and endangered languages," Valijärvi and Kahn (2023: 153) have found that "they can actually act as a powerful, user-generated tool which supports speaker agency and can guarantee a bottom-up process of revitalization" at the same time. Valijärvi and Kahn (2023: 143) look at the positive and empowering role of new media in the context of minority- and endangered-language communities through analyzing existing case studies from around the world, such as how Maya musicians use YouTube to reach global audiences and spread a positive representation of their culture and language (Estrada 2019), or how the Hasidic Jewish community in New York uses online forums anonymously as a "loci of resistance and opposition" (Fader 2020; Bleaman 2020), among others. By focusing on how various digital platforms (social media, gaming platforms, apps, podcasts, internet forums, etc.) are used to create opportunities for active use and content creation, Valijärvi and Kahn (2023: 153) demonstrated how digital platforms can create "global grassroots language-based communities" effectively.

Taking the above studies into consideration, it can be established that digital spaces and technology can simultaneously offer vital opportunities but also pose serious challenges that can threaten the sustainability and presence of indigenous, migrant and minority languages online. While these communities frequently struggle with linguistic insecurity due to continued discrimination, lack appropriate digital tools, access, and visibility due to the inequal power positions in face-to-face and digital contexts as well (Moring 2013), studies have also demonstrated that these setbacks do not tend to hinder their desire to share their experiences,

cultures, and languages online (Moring 2013; Ferré-Pavía et al. 2018; Belmar and Glass 2019; Fader 2020; Bleaman 2020; Valijärvi and Kahn 2023), but instead strengthen their resilience and agency. Research has repeatedly shown how minorities can be "networked actors", as Androutsopoulos (2015: 189) described, who are not merely consumers of digital media and technology but are "active shapers" of it (Cunliffe 2007: 147), which is often manifested through their creative adaptation and repurposing of already existing resources (Cunliffe 2007; Danet and Herring 2007; Vaisman 2011; Cormack 2013; Androutsopoulos 2015; Tagg 2015; Lee 2016).

3. Vojvodina

3.1. Vojvodina's history, culture, and linguistic diversity

The Autonomous Province of Vojvodina (also often referred to as APV) is located in the northernmost part of the Republic of Serbia and is a unique region that has been and continues to be shaped by its rich history and linguistic and cultural diversity (Belić 2014). The history of many ethnic groups of the region, such as that of the Hungarians, dates back to the 9th century (Göncz 2004). The presence of Hungarians in the region in particular can be tied to two major settlement phases: while the first phase (following the 1520s) was interrupted by the Ottoman conquest, the second phase began around the 1730s and involved not only the repopulation of Hungarians, but also Germans, Rusyns, and Slovaks among other groups (Göncz 2004). In the Provincial Statute, which is Vojvodina's foundational legal document, it is explicitly stated that the region and its people must promote multiculturalism and multiconfessionalism, which foregrounds the importance of recognizing and nurturing diversity in practice and on paper as well (Belić 2014), as is stated in Article 7:

> "Multilingualism, multiculturalism and freedom of confession shall represent values of particular interest to the AP of Vojvodina. Within the scope of its competences, the AP Vojvodina shall promote and help to preserve and develop multilingualism and cultural heritage of national minorities – national communities living in its territory and undertake special measures and activities to support mutual learning about and respect of languages, cultures and confessions in the AP Vojvodina."
>
> (Statut Autonomne Pokrajine Vojvodine [Statute of the Autonomous Province of Vojvodina] 2014: Article 7).

Due to the multiethnic and multicultural nature of Vojvodina, bi- and multilingualism is very common and is frequently the result of mixed marriages (Göncz 2004). The political formation of this region began after World War I, following the annexation of the territory to the Kingdom of Serbs, Croats, and Slovenes (later Yugoslavia), which was originally part of the Kingdom of Hungary (Göncz 2004; Csányi 2025). Initially, the early policy in the state was an assimilative one that explicitly gave preference to and promoted the Serbo-Croatian language (Göncz 2004; Szerbhorváth 2015), which negatively impacted the minority languages and communities in the region. Later on, changes started taking place in 1974 at the time of the Socialist Yugoslavia (SFRY), which formally recognized minority languages including Romanian, Hungarian,

Slovak, and Rusyn as official languages on the territory of Vojvodina (Szerbhorváth 2015). These changes allowed minorities to use their first language(s) in courts, public spaces (e.g., street names on signs), administrative offices, and also request documents to be printed both in the state language as well as their own first language (Szerbhorváth 2015). However, minority communities in Vojvodina continue to face challenges to this day despite these legal protections (Szerbhorváth 2015; Beretka 2016).

Aside from Serbian, there are five languages with official status today in Vojvodina, which include Hungarian, Slovak, Rusyn, Croatian, and Romanian (Statute of the Autonomous Province of Vojvodina 2014; Belić 2014; Szerbhorváth 2015; Beretka 2016). While these languages have their official statuses in multiple municipalities, in most cases, these languages have specific purposes and distinct spaces of use when compared to the majority language, Serbian (Göncz 2004). A minority language is granted the official status only in those local municipalities where that minority group makes up more than 15% of the population (Szerbhorváth 2015). Although these minority languages in Vojvodina have the official status, Serbian continues to dominate formal and public domains in the majority of the cases, which further undermines the position of the other languages in the region (Göncz 2004; Beretka 2016). Very frequently, these communities face challenges in domains crucial to language maintenance such as education, where instruction in the first language is restricted and inadequate (e.g., due to a lack of teachers or other specialists speaking the given minority language as a first language), and legal rights alone cannot solve the long-term issues arising from these shortcomings (Szerbhorváth 2015). These play a significant role in the process of assimilation, as minorities might find it easier to achieve higher success in terms of education and career if they choose to go through higher education in the majority language (Serbian), which simultaneously is set to lead to the long-term decline in the functional use of their minority language(s) in their private and professional life alike (Szerbhorváth 2015).

The Hungarian minority in particular has faced serious challenges, including a continued demographic decline since the 1990s (Gereben 2002), which persisted for several decades up to the present day. The latest census data, from 2022, has shown that there were 182,321 Hungarians in Vojvodina, as opposed 251,136 Hungarians in 2011, which indicates a drastic decline in the Hungarian population in Vojvodina (Palusek 2024). Despite the societal, political, and linguistic pressures, the Hungarian community in Vojvodina continues to express their desire to maintain their ties to their culture and language to this day (Szabó et al. 2013; Székely 2018), with various support systems, such as the Hungarian Academic Council in Vojvodina

(VMAT), which aims to support Hungarian scholarly work in the region (Csányi 2025); cultural institutions such as local Hungarian associations and media outlets playing a major role in preserving culture and traditions, and also religious bodies (Göncz and Vörös 2005; Ilić 2010). The religious communities, primarily the Roman Catholic and Protestant Hungarian churches, are also crucial institutions for preserving the Hungarian identity and language against pressures of assimilation in Vojvodina (Ilić 2010), and along with other various support systems they all aim to collectively support minority identity and language maintenance within Vojvodina (Göncz 2004; Ilić 2010).

The linguistic situation of Vojvodina is often characterized by asymmetrical bilingualism (Szerbhorváth 2015) and functional and contextual linguistic practices (Kovács Rácz 2011, 2024): while Vojvodina Hungarians generally acquire both Hungarian and Serbian growing up to varying extent (most usually at school and/or at home), the majority (Serbian) language speakers rarely learn any Hungarian (Mirnics 1994; Szerbhorváth 2015). As Göncz and Vörös (2005: 198) assert, "[t]he range of functions of Hungarian is restricted and reduced" to "the familial-colloquial level and that of journalism and literature, but at the public and professional level it has a very partial presence." The Serbian language replaces Hungarian in Vojvodina in various cases, which include "official governmental vocabulary, specialized vocabulary, the vocabulary of administrative and cultural life, public education, commerce, and health care" as well (Göncz and Vörös 2005: 198). Palusek (2024: 112) discusses a more current example of this, the case of Subotica/Szabadka, which has long been the "cultural, educational, and political center for Hungarians in Vojvodina" besides the town of Senta/Zenta, however, lately, Subotica/Szabadka has been increasingly experiencing Serbian ethnic influence as well as dominance in various areas including politics and administration. Education is another area which causes concern, particularly higher education. Recent studies have found that Vojvodina Hungarian students frequently choose to continue their studies in Hungary instead of Serbia primarily because they feel that their knowledge of the state language, Serbian, in inadequate and this acts as a significant barrier for Vojvodina Hungarians (Gábrity Molnár 2013; Palusek 2015; Kincses and Nagy 2019). Moreover, findings have shown that their choices are also influenced by beliefs that career prospects are better in Hungary, and due to the proximity of the two countries, these are all major factors that influence their decision to migrate for academic purposes (Palusek 2015; Kincses and Nagy 2019). Furthermore, as Gábrity Molnár (2013) contends, the challenges faced by the Vojvodina Hungarians are further complicated by the fact that there is no autonomous Hungarian higher education system in place in Vojvodina

and Serbia, nor are there many programs that have Hungarian language instruction, and quite often, there is a shortage of well-trained teachers and adequate textbooks too (Gábrity Molnár 2013), not only in higher education, but at all levels.

Due to these instances of imbalance, the maintenance of Hungarian is constantly challenged, as the use of Serbian often replaces Hungarian in a variety of contexts, considering that it has a much more socially and institutionally dominant status in public domains, including higher education and employment (Mirnics 1994). For this reason, the Vojvodina Hungarians' choice of language in daily life is a dynamic process that heavily depends on the various communicative situations, power relations, and the broader social context (Kovács Rácz 2011, 2024), and it also often instigates them to learn Serbian if they wish to live and work in Serbia.

One of the primary reasons why the maintenance of Hungarian in Vojvodina is so challenging stems from the continuous sociological and demographic pressures: while there is active promotion of the importance of the Hungarian language and identity, the role of Hungarian in education, and its visibility in social communication and the media, these are constantly being challenged, and such efforts are further complicated by the demographic crisis (Kovács Rácz 2024). This crisis includes "low birth rates, increasing emigration, and assimilation", which are all contributing to the declining number of Hungarian speakers in the region, and is especially noticeable in scattered settlements where the population is already quite low (Palusek 2024: 120). Consequently, instances of language shift sometimes occur in this region, especially in more dispersed minority communities (referred to as *szórvány* in Hungarian), where speakers frequently mix Hungarian and Serbian as a result of frequent contact with Serbian speakers, the necessity of using and speaking Serbian in administrative and government institutions (Szerbhorváth 2015; Kovács Rácz 2024), and declining contact with Hungarian speakers (Palusek 2024). Furthermore, there are institutional barriers hindering the Hungarian community and minority representation, specifically what concerns public employment (Szerbhorváth 2015; Palusek 2015). Efforts to achieve proportional employment in public administration and government institutions often fail due to the scarcity of specialists who speak the minority language, and due to the fact that institutions are not sanctioned for failing to hire them (Szerbhorváth 2015). These systemic failures further contribute to the declining of Vojvodina Hungarian and hinder overall minority representation (Szerbhorváth 2015).

3.2. Education and language policy in Serbia and the Balkans

Due to the above-mentioned systemic issues present in Vojvodina, it has become increasingly important to study its multilingual environment and the power dynamics among the spoken languages and communities in the area (Mandić and Rácz 2023; Rácz 2024). While more recent studies focus on digital trends and phenomena, the first all-encompassing sociolinguistic account of the linguistic situation of Vojvodina Hungarians was established by Göncz (1999), who explored various social as well as psychological dimensions of bilingualism in Vojvodina. His work provided the foundational framework that continues to influence and inform research done in the field and in this region to this day. For these reasons, a variety of studies have thus far examined the educational context of Vojvodina and the country's formal linguistic policies, but an increasing number of scholars have also started focusing on investigating the multilingual environment of Serbia and the Balkans, with some specifically concentrating on language attitudes, identity formation, and digital media use of Vojvodina Hungarians.

Before moving on to the specific sociolinguistic challenges that researchers such as Filipović et al. (2007) discuss in their work, we need to take a closer look at the status of the Hungarian language in the region. To contextualize these challenges, it is important to note that the Hungarian language holds an official status in Serbia, particularly within the Autonomous Province of Vojvodina (Petsinis 2025). This status is enforced by the Serbian legal framework which currently guarantees the right to the official use of Hungarian in local administration in seven settlements and 28 municipalities across Vojvodina (HUNinEU n.d.). Through the 2016 'Action Plan for the Materialization of Minority Rights,' the legal framework establishes the "operation of the national minorities' councils, education in minority languages, political participation, the public use of minority languages, and the prohibition of ethnic discrimination" (Petsinis 2025: 10). This document is also reinforced by Hungary's 'kin-state activism' with the 2001 Status Law, which specifies that it fully provides support to "establishments and organizations of accredited Hungarian higher education institutions in neighbouring countries" (Hungary: Act LXII of 2001 on Hungarians Living in Neighbouring Countries 2002; Petsinis 2025: 9). However, despite Hungarian being officially recognized and having legal support on both sides, this does not manifest in the same way in practice, especially what concerns education. To begin with, the formal linguistic and educational situation in Serbia presents significant challenges, which Filipović et al. (2007) explore in their work, focusing on the Serbian language education policy and planning (LEPP) through four types of languages

(Serbian as L1, Serbian as L2 for ethnic minorities, minority languages, and foreign languages such as English, French, and Russian) present in the country. As they argue, the policy in place at the time (including the lack of professionals, inadequate teaching materials and curriculum, and not enough time spent learning Serbian as an L2) has frequently resulted in imbalanced and subtractive bilingualism that hinders their ability to fully function outside of their ethnic communities (Filipović et al. 2007). As a solution to this generational issue, language education planners put forward the idea of inclusive bilingualism, however, bilingual programs in Serbia have not been encouraged much despite all conditions being given (Filipović et al. 2007; Mandić and Rácz 2023). This study contrastingly suggests as a remedy the restructuration of LEPP goals in terms of methodology and language contents, as this model includes and gives recognition to important extralinguistic factors, such as the political and socio-economic power of languages, and also foregrounds the need to develop intercultural communicative competence, which would ideally promote cultural pluralism (Filipović et al. 2007).

In addition to the challenges that Filipović et al. (2007) discuss, this gap between policy and actual practice is further complicated by the choices that parents and students in the region ought to make in relation to their medium of instruction. This is demonstrated in another study by Ateljević (2017), who observes early bilinguals and their educational choices mainly focusing on Vojvodina Hungarian bilinguals in the Serbian and Hungarian languages, while also elaborating on the status of bilingual education in Serbia. While Ateljević (2017) supports the idea of implementing and developing bilingual education in cases of homogenous municipalities, such as the Municipality of Kanjiža/Kanizsa, thorough planning is necessary for a functioning system. The highlighted issue is that official bilingual education programs combining a minority language and Serbian have only been attempted, in vain, with Serbia Bosnian and Serbia Bulgarian minorities (Filipović et al. 2007), and they also tend to face resistance from minority councils based on the fear that these programs would result in assimilation and language loss. This resistance is contrasted by the increasing number of bilingual education programs which are not the combination of a minority language and Serbian, but of Serbian and some other foreign language like English, German, and Italian, which ultimately further marginalize and threaten those (Ateljević 2017). These programs were implemented in the 2004/2005 academic year in a few elementary and high schools and have continued to be strongly supported by foreign institutions, even in Vojvodina, where Serbian–English bilingual education began in 2015. Ateljević (2017) concludes that the lack of attention given to minority languages and the minority language loss experienced by many are partly due

to the focus being on foreign languages that are perceived to be prestigious socially in such educational programs. The findings of the study also demonstrated that regardless of students' educational history and level of knowledge and competence in the Serbian language, these factors did not seem to negatively affect their Hungarian language skills, and their preference for national identity would also remain Hungarian (Ateljević 2017).

In a similar vein, Filipović (2017) also examines these educational challenges but proposes an alternative model for bilingual and plurilingual teaching that is student-focused, however, it is also much more challenging to achieve. As she argues, a modular approach would be most ideal, where meaning-making is not restricted to one single language and is taking place within an atmosphere where "students are encouraged to apply all the linguistic repertoires they have at their disposal to explore and critically evaluate topics of relevance in their personal and communal contexts, which may or may not be always explicitly present in the mainstream curricula" (Filipović 2017: 391). These conditions would ideally encourage students to use whichever majority and/or minority languages they know and are most confident speaking in order to succeed and be able to reach their goals, while simultaneously boosting their self-confidence which would ideally limit harm to their mental health in the process (Filipović 2017). This is particularly relevant as such a system could also discourage them from dropping out of school, which is a recurring issue with minorities, as Filipović (2017) warns. She also highlights that unlike the traditional teaching methods, the modular approach would provide adequate training and would simultaneously offer 21st century skills, such as new literacies, including problem solving and critical thinking, to every student, but most importantly, for this system to fully function, no difference ought to be made among students, teachers, or the languages present in classrooms, as the lines between students and teachers and the languages present in the classrooms are blurred and given equal opportunity.

While Filipović (2017) and Ateljević (2017) focus on the contemporary pedagogical challenges in the region, other studies such as Mandić and Rácz's (2023) highlight already existing, historical, but unfortunately abandoned models of teaching and demonstrate how their re-introduction could once again promote inclusive multilingualism, which would benefit various communities, not just the Vojvodina Hungarians'. In this study, Mandić and Rácz (2023) examined the optional school subject "Language of Social Environment" (LSE), which was once part of the Yugoslav curriculum in Vojvodina (1960s through the 1980s) originally for students whose L1 was Serbo-Croatian. By 2012, the reintroduction of this subject (now as Hungarian as LSE) was requested by the City Council of Subotica/Szabadka on multiple

occasions to no avail (Mandić and Rácz 2023). During their fieldwork in Debeljača/Torontálvásárhely, Mandić and Rácz (2023) found that the former teachers and students (as well as their families) of the once taught school subject found the subject very beneficial as it could not only strengthen children's multilingual competence, but due to the subject being grounded in the values of societal multilingualism, it also represented and supported multilingualism. These values are especially important to highlight when it comes to minority languages and their position within a society, since this "language-as-resource" approach aims to foster tolerance (Mandić and Rácz 2023), which is vital for the survival of minorities. Mandić and Rácz's (2023) findings align with those of Gal (2011, 2012), who contradicts the misconceptions regarding the link between 19th century nationalism and monolingualism through discussing specific examples of polyglot nationalism in Hungary. The examples Gal (2011) discusses in her work clearly indicate that multilingualism was not regarded negatively on a universal and unequivocal level. Building on this, the LSE model that Mandić and Rácz (2023) analyze provides an additional, but more importantly, a local example that similarly contradicts those common negative beliefs about attitudes towards multilingualism from a historical perspective. The findings of Mandić and Rácz (2023) further emphasize how the locals' attitudes towards multilingualism have tended to be relatively positive over a longer period in Vojvodina dating back to the mid-20th century, instead of this being a recent phenomenon in the region. Their findings highlight that the "language-as-resource" approach was already part of the educational system in Vojvodina, and by encouraging the Serbian speaking population to learn Hungarian, the LSE model contributed highly towards a "balanced hierarchy" and the local understanding of bi- and multilingualism as an integrated and everyday linguistic practice in the region (Mandić and Rácz 2023: 3).

However, the success of models such as the "LSE" that Mandić and Rácz (2023) discuss is simultaneously dependent on how speakers perceive their regional varieties and other language(s) present in their environment to begin with. In light of this, Kovács Rácz and Halupka-Rešetar (2018) explored the attitudes towards local varieties and the sense of local identity among Vojvodina Hungarian pupils (5th to 8th graders, aged 12 and 15) with the aim to gather information that could be used for the development of a more effective first language education curriculum in Vojvodina for the Hungarian minority. Based on their findings, the students generally exhibited positive attitudes towards their own local dialect even despite sometimes facing negative attitudes from others in their environment (Kovács Rácz and Halupka-Rešetar 2018). As Kovács Rácz and Halupka-Rešetar (2018) note, the adaptation of

additive language pedagogy among educators in any minority setting would result in the most beneficial outcomes regarding the retention of one's first language and the preservation of linguistic diversity, which is not currently in practice in most places (Kontra 2015; Kovács Rácz and Halupka-Rešetar 2018).

The struggles of maintaining identity and language are also echoed in other regions and communities of the broader Balkan region. Within this context, studies have focused on topics like the impact of digital media (Pásztor-Kicsi 2012, 2016; Đerčan et al. 2020), digital media consumption (Pásztor-Kicsi 2016), attitudes towards different regional language varieties (Kovács Rácz 2012; Kovács Rácz and Halupka-Rešetar 2018), and the multilingual situation and environment in Serbia and beyond (Balla et al. 2012; Petrovich 2016; Morozova and Rusakov 2021).

Stepping briefly outside of the Serbian context but keeping close to the topics of minority identity and the multilingual context, Morozova and Rusakov's (2021) study examined the Montenegrin village of Velja Gorana close to the Albanian border, where balanced bilingualism between BCMS (Bosnian–Croatian–Montenegrin–Serbian) and Albanian has remained through generations. Based on their fieldwork, Morozova and Rusakov (2021) found that the Velja Gorana's case is a rare one, where both the BCMS and Albanian are maintained thanks to a variety of social and demographic factors, such as marriage patterns for example. As they point out, men whose L1 is BCMS often marry women whose L1 is Albanian, which ensures that both languages are continuously passed down to the next generation (Morozova and Rusakov 2021) and are actively used at home and within the community, despite institutions and formal education taking place in BCMS. Their findings also suggest that the maintenance and transmission of both languages is closely tied to gender and local identity, as speakers tend to address specific people in their respective first languages. While the local Slavic identity encourages men to actively use and pass down BCMS to their children, the "constant influx of women who speak Albanian as L1" (Morozova and Rusakov 2021: 16) maintains the use of Albanian and ensures their children acquire it growing up. Overall, Morozova and Rusakov's (2021) study is highly valuable as it provides insight into how specific social and demographic factors along with context-dependent, conscious, and strategic language choices are positively contributing to a stable multilingual environment and its speakers, where all languages are viewed and treated as equal. While the situation in Vojvodina is often defined by asymmetrical bilingualism, the case of Velja Gorana in Montenegro offers a very valuable comparison, as it

shows how specific socio-demographic factors can help create an environment, where balanced bilingualism and language maintenance are possible even without the support of institutions.

However, for communities like the Vojvodina Hungarians, where these specific parameters are much less present and pronounced than they are in Velja Gorana, digital spaces emerge as crucial and potentially life-changing spaces for the maintenance and survival of their identities and language(s). In a 2011 research project, *Mozaik2011*, on minority Hungarians living outside of Hungary, Szabó et al. (2013) discovered drastically different stances regarding the importance of national belonging, identity, and the importance of one's first language. As they note, in contrast with the Hungarian minority in Austria, the Hungarian minority in Vojvodina (who often face financial difficulties and linguistic and social discrimination) find their identity and first language to be of utmost importance in community building and cultural, ethnic, and linguistic preservation, especially in online settings. Galácz and Ságvári (2013) looked at how the internet impacted the lives, linguistic practices, international and intranational connections, and the identities of minority Hungarian youth living outside of Hungary in the regions neighboring it. Their results revealed that already at the beginning of the 2010s, young people were undoubtedly using the internet and social media and often expressed positive attitudes towards multilingualism for the expanding possibilities it can bring for them (Galácz and Ságvári 2013). The participants also talked about the importance of knowing their country's state language for educational and especially economic reasons. Interestingly, the young minority Hungarians expressed a variety of opinions regarding the practice of language mixing online, as some found it distressing and confusing in cases where they did not understand the language and expressions being used (Galácz and Ságvári 2013). Their respondents had extensive experience with digital media, and global, international, and especially English influences were also observed in terms of language choices and content consumption (Galácz and Ságvári 2013). As can be seen through their findings as well, research has underscored that multilingual language practices are integral parts of the daily lives of various bi- and multilingual communities (Galácz and Ságvári 2013; Mandić and Rácz 2023), both online and offline.

Content creation, digital engagement, and, more specifically, digital linguistic practices among Vojvodina Hungarians have not been researched much so far, even though Vojvodina has a multilingual, multinational, and multiethnic population (Balla et al. 2012; Petrovich 2016; Jánk and Rási 2023) that is also digitally connected. This is demonstrated in earlier findings, which highlight that digital media consumption (Székely 2018) takes place on a regular (daily)

basis in Vojvodina, especially among younger generations, but older generations have also reported using mobile phones, laptops, and especially social media like Facebook, Instagram, and TikTok, where they regularly encounter English language media.

National identity and belonging have also been studied in order to uncover the viewpoints of minority Hungarians living outside Hungary (Székely 2018; Jánk and Rási 2023), which have turned out to vary predominantly between neutral and positive. A recent study by Jánk and Rási (2023), on seven Hungarian minority territories neighboring Hungary, has uncovered that the proportion of Hungarian speakers has declined due to assimilationist language policies in the respective countries and minorities are still facing challenges related to negative language attitudes towards non-standard varieties, very often from Hungarians from Hungary. As Jánk and Rási (2023) state, the reason behind their disadvantaged situation is as follows:

> "[a] social structure which is strongly standard-centred and mono-normative, both linguistically and in general, which treats linguistic differences as a fault and as a target of stigmatisation. This attitude, however, is detrimental to the preservation of the language and, in this context, to the survival of the Hungarian minority, since almost the entire Hungarian minority living beyond the border speaks some kind of non-standard dialect. This means that they are not only confronted with the less supportive or downright repressive language policy of the state in which they live, but also with the exclusionary linguistic attitudes and prejudices of their own Hungarian language community."
>
> (Jánk and Rási 2023: 15).

Similar results have shown a steady weakening in most areas including Vojvodina and a rather strong tendency to assimilate to the majority language and nation in Slovakia (often due to friendships with majority individuals). However, the results also uncovered that the regular use of the Hungarian language along with nurturing connections with the Hungarian community do support Hungarian identity (Székely 2018) as well as linguistic practices. Overall, the results of previous studies suggest that for maintaining good relations with the community (both in terms of the immediate minority and other Hungarians from neighboring regions) there is a need for more support and opportunities that could ensure or at least promote the use of Hungarian both online and offline (Pásztor-Kicsi 2016; Székely 2018). With the help of the internet, various new and free platforms are available for building community, establishing

communication, and nurturing national and regional ties alike (Pásztor-Kicsi 2016; Székely 2018).

Studies have also focused on exploring the attitudes of Vojvodina Hungarians towards different varieties of English and Hungarian both in the region as well as in Hungary (Kovács Rácz 2012; Kovács Rácz and Halupka-Rešetar 2018; Jánk and Rási 2023). Most of the studies tend to examine the language attitudes towards the local varieties among younger individuals, such as 5th to 8th graders (Kovács Rácz and Halupka-Rešetar 2018) and university students studying at the Department of Hungarian Language and Literature, Faculty of Philosophy, University of Novi Sad (Pásztor-Kicsi 2016), as well as older individuals (Jánk and Rási 2023). The results of the study that specifically focused on the impact of English language media and the internet on the linguistic practices and identity of Vojvodina Hungarians (Pásztor-Kicsi 2016) indicate that digital media does not have a strong effect on the respondents' attitudes towards their spoken varieties or English, as most of the students studying at the department have low proficiency in English as well as in Serbian. This finding suggests that the language policy has had limited success in fostering competence, which Pásztor-Kicsi (2016: 44) understands is making communication and use of global resources difficult for them and could also indicate that they will continue to show a preference for their first language "and local community than let the global trends assimilate their identity." While it was noted that negative attitudes or discrimination against regional varieties is experienced by participants occasionally (Pásztor-Kicsi 2016; Jánk and Rási 2023), the vast majority of respondents in these studies have either claimed to have neutral or positive attitudes towards their own spoken variety and the standard Hungary Hungarian.

Also in the Serbian context, Rácz's (2024) study focused on the visual and linguistic aspects of Vojvodina Hungarian Facebook pages (interactions with the posts and images) and revealed that many Vojvodina Hungarians shape and showcase their Vojvodina Hungarian identities online through the use of Vojvodina Hungarian memes that they can relate to, which very frequently include Serbian loanwords and often translanguaging, alongside humor and other recurring themes. Not only do these practices strengthen speakers' Vojvodina Hungarian identity, but they also simultaneously differentiate themselves from Hungarian communities in Hungary (Rácz 2024), while also reflecting their multilingual and ethnically mixed environments in real life that also transfers into the online space.

Research so far on Vojvodina Hungarians has thus illustrated how the use of digital platforms, experience with digital media, language attitudes, and identity all affect and constantly shape one another. Findings indicate that Vojvodina Hungarians, despite facing persistent linguistic and social discrimination – challenges that have been frequently linked to a rigid, standard-centered and mono-normative social structure (Jánk and Rási 2023) – are nevertheless very committed to the preservation of their language and culture (Szabó et al. 2013; Székely 2018). Their efforts are increasingly gaining visibility in digital spaces, where they continue to actively shape and express their Vojvodina Hungarian identity (Pásztor-Kicsi 2016; Székely 2018; Jánk and Rási 2023), at times by repurposing existing materials, and other times by creating and sharing their own (Rácz 2024). Studies have shown that Vojvodina Hungarians regularly use social media platforms like Facebook to share locally popular memes and were also found to engage in translanguaging regularly (Rácz 2024). These practices were found to not only strengthen their Vojvodina Hungarian identity but are also to be representative of a strategic linguistic practice whereby the purposefully differentiate themselves from Hungarian communities in Hungary, reflecting their multilingual and mixed environment which transfer over from offline context into digital spaces (Rácz 2024). Earlier studies (Szabó et al. 2013) have also demonstrated how identity and first language are of utmost importance for community building and enforcing purposes. These findings also point to the need for more inclusive and flexible educational approaches in the Vojvodina Hungarian context. While past policies have often resulted in subtractive bilingualism (Filipović et al. 2007), alternative models like the modular approach Filipović (2017) proposes, or the "Language of Social Environment" school subject that Mandić and Rácz (2023) discussed could offer more hopeful and successful outcomes that would ideally foster inclusive bilingualism and inspire students to learn and better their intercultural communicative competence. Similarly to the underlying goals of encouraging translanguaging in language classes (Williams 1994, 1996; Baker 2001; Gwyn et al. 2012), the modular approach (although rather challenging in practice) also has the potential to encourage students to rely more on their entire linguistic repertoire. This could also in turn inspire them, boost their self-confidence, and help them with developing critical thinking skills (Filipović 2017). However, if Serbian bilingual programs keep focusing on pairing Serbian with prestigious foreign languages (Ateljević 2017), this will further marginalize minority languages in the region, only worsening the challenges the Vojvodina Hungarian community already faces through the negative attitudes towards their non-standard variety (Jánk and Rási 2023). Ultimately, these findings point to the importance of considering factors like language choice, digital literacy, and cultural identity in understanding the experiences of

minority language communities in the digital age (Filipović et al. 2007; Szabó et al. 2013; Pásztor-Kicsi 2016; Filipović 2017; Ateljević 2017; Székely 2018; Jánk and Rási 2023; Mandić and Rácz 2023; Rácz 2024). For better stability and maintenance, regular use of Vojvodina Hungarian must be supported and promoted both online and offline to ensure the long-term survival of the community's language and identity (Pásztor-Kicsi 2016; Székely 2018).

4. Methodology

The present chapter introduces the final form of the implemented methodology (already published in Kostic 2025a and 2025b in its current form) as well as the first phases of the research. To begin with, the very first section briefly discusses the exploratory preliminary study carried out as part of the research that the present dissertation is based on, which has been previously published in Kostic (2024) in its current form as it appears here. Following this, most of the present chapter is then devoted to discussing the final version of the revised and implemented methodology along with the research questions.

4.1. Preliminary study

Before finalizing the methodology for the present dissertation, the first research project was planned and conducted in 2023 to see what types of questions and topics would yield the most adequate and useful data on Vojvodina Hungarians' digital and linguistic practices in general. At this point in the research, Helsper and Eynon's (2010) Digital Nativeness test was not yet implemented nor was Lee's (2014) techno-biography, however, the questions that were formulated for the original Google Forms questionnaire were very similar, which then later led to the inclusion of an adapted version of both Helsper and Eynon's 2010 Digital Nativeness test in a questionnaire, and Lee's 2014 techno-biography as one of the main sections and orientations of the interviews. Therefore, the present section discusses the initially formed research questions along with their hypotheses, the main observations, and the findings of this exploratory preliminary study. To describe Vojvodina Hungarians' digital presence, linguistic background, language practices, and language choices in both digital and face-to-face situations, the following research questions were formulated in the initial stages of the research:

1. To what extent are the Vojvodina Hungarians involved in digital spaces and digital content creation and content sharing?
2. How do Vojvodina Hungarians use their languages in digital spaces?
3. To what extent do digital (i.e. online) vs. face-to-face (i.e. offline) language use and language choices differ for Vojvodina Hungarians?
4. What factors affect the language choices of Vojvodina Hungarians in digital spaces?
5. What roles and functions do digital spaces play/have for the Vojvodina Hungarians as a minority?

The preliminary study and the five research questions listed above served as the foundational framework for the present dissertation and were exploratory in nature. The findings from this initial and exploratory phase informed the final research design, narrowing the focus of the study, and also highlighted the importance of including the Digital Nativeness test and the techno-biography for a more comprehensive analysis.

Based on the findings of previous studies on contact with social media and English dominated online spaces (Durham 2007; Lee 2014 Lackaff and Moner 2016; Cunliffe 2019), the first hypothesis of the exploratory study was that those who had frequent contact with the internet would have differing language choices in online spaces as opposed to face-to-face situations, especially when it comes to English in online settings. Additionally, considering that Vojvodina is a vastly multilingual and multiethnic region (Balla et al. 2012; Petrovich 2016; Jánk and Rási 2023), language mixing of Hungarian and Serbian in face-to-face (and to some extent online) communication would also be an expected outcome. Finally, the level of experience, extent of interaction, and the nature of online engagement may also indicate an age-based division concerning digital presence (Prensky 2001; Helsper and Eynon 2010), active participation online, the type of digital activities, as well as the preference towards using English in online communication and platforms (Durham 2007; Lee 2014).

The questionnaire (see Appendix 1) was divided into four sections covering a different aspect, including the participants' language knowledge and their history with languages, linguistic practices in several different contexts and domains, and digital media consumption and habits. The data collection was done with the help of a Google Forms online questionnaire, while the gathered responses were analyzed and summarized with the help of Microsoft Excel. Appendix 1 represents the questions used in the data collection process, as well as the results and the general tendencies. The results are expressed and visualized in tables under the respective questions within the Appendix for easier management, organization, and representation.

4.1.1. Participants of the preliminary study

The total number of participants in the preliminary study is 63 (28 males and 35 females), ranging from under 18 to over 55. A total of 40 (63%) participants claimed to have been born in and currently reside in Bačka/Bácska, and 20 (37%) in Banat/Bánát. With the exception of 5 individuals who have moved abroad, the rest of the participants still reside in or near their

birthplaces. Concerning their educational background, 11% finished elementary school (mostly current high school students), while the remainder hold high school diplomas (43%), postgraduate degrees (24%), bachelor's degrees (19%), or associate degrees (3%), and most of them were employed (54%) or students (32%) at the time of the study. As for nationality, 94% of participants identified as Hungarian. When asked which languages they grew up speaking most, 86% answered Hungarian, while 14% answered both Hungarian and Serbian, however, each participants considered Hungarian to be their first language.

4.1.2. Language knowledge and general tendencies in linguistic practices

In order to understand the participants' digital habits, language choices, and digital linguistic practices, a section in the questionnaire (*B. Language Knowledge and History,* Questions 11–28) focused on gathering data on their overall language knowledge and their history with languages. The participants reported that they learnt Hungarian, Serbian, and English slightly differently. While Hungarian was most commonly acquired at home and in the family at an early age (see Question 13 in Appendix 1), Serbian and English were learnt at school and through interactions with friends or colleagues mainly. The most striking difference between these three languages is that English is the only one reported to be learnt and encountered almost exclusively on the internet and in language classes.

While family language practices were found to be happening predominantly in Hungarian, speaking multiple languages in a multilingual environment has shown to produce conversations where language mixing occurs on a regular basis (Lee 2014; Lynn et al. 2015; Jongbloed-Faber et al. 2016). Those who claimed that they mixed languages in conversation seem to be open to it and supportive of the practice, seeing it as a special part of their local identity. Mixing languages in conversations (Questions 22 and 23, Appendix 1) has proven to be a familiar and broadly accepted practice, as 90% of participants do not mind when their conversation partners switch between languages during conversations.

On average, participants were most confident in their Hungarian language skills (see Appendix 1: Table 6), followed by English (see Appendix 1: Table 8), while Serbian language skills (see Appendix 1: Table 7) were the ones participants were least confident about. Despite more participants reporting not knowing or speaking English at all (7% vs. 3% in the case of Serbian), they still seemed to be less confident in their Serbian language skills compared to English. This could be connected with difficulties that native Hungarians might face during

schooling, such as learning and reading the Cyrillic alphabet and maintaining that knowledge long term. Overall, these results showed that confidence and bravery are highest when speaking Hungarian (92% face-to-face, 95% online), followed by English (52% face-to-face, 68% online), and lastly by Serbian (46% face-to-face, 44% online). Finally, when comparing language choices in online spaces and in face-to-face situations (Questions 27 and 28), the answers provided by the participants show a drastic divide: the bulk of online communication for the participants takes place in English (52% of the time) and Hungarian (43% of the time), while in face-to-face communication, Hungarian is predominantly the chosen language (87% of the time) as opposed to both Serbian (6%) or English (6%).

4.1.3. Digital habits, content creation, and language choices online

The final section of the questionnaire focused on digital linguistic practices and online activity of the participants (*D. Internet use and active online language use*, Questions 39–45). The results showed that the participants unanimously agreed that they all had access to a variety of internet content (including websites, newspaper articles, news portals, blogs, etc.) in Hungarian, Serbian, and English as well (Question 39). However, despite having access to all three language websites, participants most regularly visited Hungarian (65%) and English websites (58%), while Serbian websites (25%) were visited much less frequently.

Regarding the participants' social media activity rate, their answers revealed that the most frequently visited platforms were TikTok (65%), Instagram (64%), YouTube (58%), and Facebook (55%), as opposed to websites such as Reddit (35%) and Twitter/X (45%). While the frequent usage of Instagram and TikTok mostly came from participants aged under 18 up to those aged 26–35, the age groups of 36–45, 46–55, and over 55 made up the majority of usage in the case of Facebook.

Questions 42 and 43 asked the participants about their digital practices and their language choices when participating in a variety of online activities, which included social media engagement, commenting, sharing videos, text, and photos, writing blogs, playing video games, and creating videos. The results indicated that while the participants generally engage in more traditional activities such as commenting and chatting on social media (73% do it daily) or sharing pictures on Instagram (68% daily), they do not usually engage in activities that involve creating new materials (86%) and sharing them publicly. Due to this, the participants turned out to be passive observers on the internet rather than active creators.

Regarding the linguistic preferences of the digitally active participants in online contexts, most prefer the use of English (25%) and Hungarian (24%), while Serbian is only occasionally chosen for these activities (6%). A similar trend could also be observed in their Googling habits (Appendix 1: Table 17), where participants showed they tended to browse most often in English (62%) and Hungarian (52%), but not so much in Serbian (9%). Overall, their language choices when contributing to online discussions heavily relied on the language of comments on the respective websites (75%), the subject of comments or content (55%), and their own first language (44%), while the language they speak best (24%) and their own cultural background (13%) were less influential in these preferences.

4.1.4. Linguistic practices and online communities: preferences and functions

The third section of the questionnaire (Appendix 1, *C. Language Use*, Questions 29–38) focused on the general tendencies regarding the Vojvodina Hungarian participants' linguistic practices and language choices. What the results suggest is that Hungarian is the most frequently chosen language daily in a variety of offline contexts, while English and Serbian are chosen a lot less and on particular occasions. The results indicate that the participants use Hungarian on a regular basis in settings such as the home, work or school, with their friends and relatives and also when they wish to express their deeper emotions. In contrast, the use of the Serbian language is not as prevalent in the lives of the participants as Hungarian is, with its use being most frequent in settings such as stores, the streets, and with neighbors and authorities. Interestingly, the results have also revealed that the use of English on the internet and for expressing profanity is more common than the use of Serbian for the same purposes. While there were some settings (e.g., conversing with relatives, neighbors, authorities, and at places like stores, the streets, libraries, and also the church) where a vast majority of participants claimed to not use English at all, there were still some instances (i.e. for the expression of deeper emotions, profanity, and in settings such as work or school, and on the internet) where the use of English was more favored than Serbian.

Overall, the participants find that the Hungarian language does receive support from institutions within Serbia (Question 36), and the availability of printed media (Question 37) is almost the same in both Hungarian (90%) and Serbian (100%), but not so much in English (62%). When asked which newspaper they would take off the shelf in the store if it was available in these three languages, 69% of the participants said they would choose Hungarian,

21% would choose English, and only 10% of participants would choose the newspaper written in Serbian. These language preferences are further inquired about in Question 32, where the results revealed that 44% of participants would choose Hungarian, 37% would choose English, and only 19% would choose Serbian. Some of the participants' explanations of their chosen language were as follows:

Those in support of English:

(a) *"Az angol sokkal több lehetőséget nyújt, főleg kommunikációban és ez például magyarul vagy szerbül szinte elképzelhetetlen nekem"*
"English offers more communicative and other types of opportunities, which I could never imagine with Hungarian or Serbian" (participant aged 18–25).

Those in support of Serbian:

(b) *"Számomra a szerb nyelv tudása Szerbiában szinte elengedhetetlen amennyiben itt szeretnék dolgozni és találni egy stabil munkahelyet"*
"For me, knowing Serbian in Serbia is almost indispensable if I want to work here and find a stable job" (participant aged 26–35).

Those in support of Hungarian:

(c) "*Nekem a magyar az anyanyelvem szóval ezt beszélem a legjobban. Mindig magyarul tudom legjobbban kifejezni magamat és egyébként is fontos a család miatt.*"
"Since Hungarian is my first language, it is the one I am most confident in. When I want to express myself, I do it best when speaking Hungarian, and it also holds an important place in my heart because of my family" (participant aged 26–35).

Regarding online engagement, 80% of participants agreed that there are online communities (Question 33), especially on Facebook, where they can converse, debate, and reminisce about shared histories. A similar percentage (78%) expressed positive opinions regarding the usefulness and necessity of such online communities for quick and efficient communication, maintaining relationships, and discussing problems:

(d) *"Egyszerűen vannak olyan dolgok, amiket csak az itteniekkel lehet megértetni, meg hát egységben az erő és a napnak végén csak hasonlóbbak vagyunk mi itt"*

"There are things that only they [Vojvodina Hungarians] can empathize with, as you know, in unity there is strength, we are similar at the end of the day" (participant aged 36–45),

(e) *"Szerintem fontos, hogy egy közösség összetartson főleg amikor egy kisebbségről van szó, mert így a kapcsolatok jobban megmaradnak. Így akkor talán kicsit lassabban távolodunk el egymástól, de lehet ez nem is következik akkor be"*
"I think it's important for a particular community to stick together, especially when it comes to a minority community, because this way the bonds remain. The disappearance of the given community either gets delayed a bit or doesn't even occur as a result of this" (participant aged 36–45).

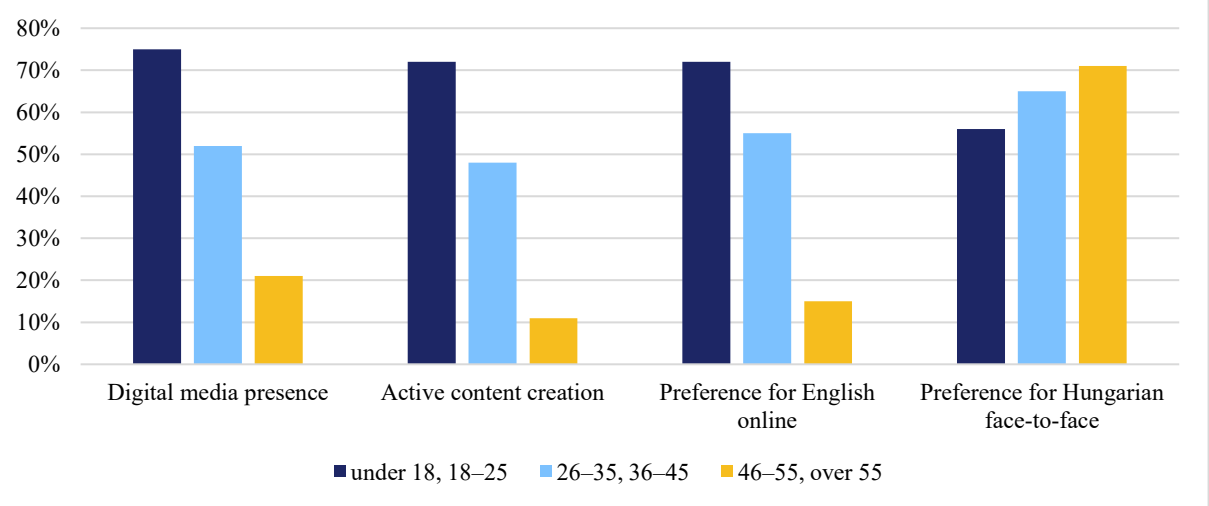
Typically, the participants are members of groups (Question 35) that revolve around cultural and public affairs (often named after their settlements, e.g. *Szabadka a mi városunk* "Subotica is our city" or *HORGOS – a mi falunk* "Horgos – our village"), humour (e.g. *University of Bótelőtt*, literal translation: "University of the corner store"), buying and selling goods in Vojvodina (e.g. *Szabadkai Piac 2023* "Subotica market 2023" for the flea market), practical groups such as border crossing status between Hungary and Serbia (*Határfigyelők - Horgos, Gyála, Királyhalom / Röszke, Tiszasziget, Ásotthalom* "Border watchers -Horgoš, Đala, Bački Vinogradi / Röszke, Tiszasziget, Ásotthalom"), and students also frequently visit the 'Vojvodina Hungarian students studying in Hungary' (*agyarországon tanuló vajdasági diákok* "Vojvodina Hungarian students studying in Hungary") group. These findings suggest that online platforms are vital parts of the participants' local and cultural identities.

4.1.5. Results of the preliminary study

The results discussed above indicate that various linguistic, generational, and socio-cultural factors influence the Vojvodina Hungarians' language choices and confidence in their language skills. While Hungarian remains deeply rooted in familial and social contexts, Serbian and English are primarily acquired through formal education or digital activities. The participants experience language mixing quite frequently and are used to it, perhaps largely due to their multilingual environment and upbringing, and only occasionally find it stressful or irritating when they encounter unfamiliar languages. Participants' confidence in their own language skills varies, with Hungarian being the language they are most confident about, closely followed by English, while they are least confident about their Serbian language skills.

To answer Research Question 3, language choices differ quite drastically depending on the environment. While the choice to use English in online contexts is more frequent than Hungarian, in face-to-face communication Hungarian is almost always the primary language. This division is especially noteworthy among participants under 36, who use social media and digital devices more intensively than those over 45. What concerns Research Questions 1, 2, and 4, the participants' digital habits revealed that technology is deeply embedded in the participants' daily routines (see also Székely 2018), yet their presence is characterized by passive observation rather than active and new content creation. Despite having access to internet content in all three languages, the majority of participants visit Hungarian and English websites most frequently, whereas Serbian websites are rarely visited. Social media activity is especially apparent in the case of TikTok, Instagram, YouTube, and Facebook. Upon further analysis (see Figure 1), an age-based division was found across these with Facebook being visited by almost all age groups, while sites like TikTok are more visited by younger audiences under the age of 35.

Figure 1. Age-based distribution of online presence, content creation, and language preferences.



Regarding language choices, participants predominantly favor English and Hungarian over Serbian. As expected, younger age groups display higher engagement in active content creation activities compared to age groups over 45. While the results did not indicate any assimilatory tendencies to Serbian like the findings of Ján̈k and Rási (2023), the case of English is different. In digital settings, participants regularly tend to choose English over other languages, and the most common factor influencing these language choices was the language

they encountered on websites, while personal (linguistic, and cultural) background proved to be much less influential.

Finally, section 4.1.4 provided additional insight and more detailed answers to Research Questions 3 and 5. Participants predominantly use Hungarian in offline settings, indicating a strong preference for their first language, while English is preferred for online communication. Participants also expressed deeply personal connections to their language choices and emphasized that online communities, particularly on Facebook, play a significant role in maintaining their cultural and local ties. The results are in line with previous findings that advocated for the usefulness of online groups and communities for minorities (Cunliffe and Herring 2005; Danet and Herring 2007; Paricio-Martín and Martínez-Cortés 2010; Lee 2016; Cunliffe 2019).

4.1.6. Concluding remarks and limitations of the preliminary study

Based on the findings of the preliminary study, it can be established that the Vojvodina Hungarian participants frequently visit digital spaces and show a tendency to consume more already existing content than create it, with the exception of some of the younger participants. The results revealed that Hungarian and English are often preferred over Serbian, with English being predominantly encountered in digital spaces and Hungarian in face-to-face contexts. This dichotomy is even more pronounced among younger participants, who claim to be more digitally engaged. The participants are used to and practice language mixing that tends to include Serbian too, which reflects their local multilingual environment. Despite occasionally encountering unfamiliar languages, the Vojvodina Hungarian participants tend to generally support multilingualism and encourage additional language learning, which they understand to be an advantage in navigating professional and personal situations alike. Their lack of preference for using Serbian could be connected to their lack of confidence in their Serbian language skills – this requires further investigation to uncover the underlying reasons. Their higher confidence in English has also shown that they are less afraid to use it in a variety of settings online and even offline. What we can tell from the results is that age and the extent of exposure do have an impact on language choices, linguistic practices, and type of digital activity one chooses to do. Additionally, the importance and necessity for online communities, having access to online resources and a platform for Vojvodina Hungarians to connect, communicate,

discuss shared histories and traditions, and maintain cultural ties, was also expressed by the vast majority of the participants.

Considering the size of the sample analyzed, one of the limitations of the preliminary study is its lack of broader generalizability, although it was not intended either way at that point in time. The study also did not have the capacity to collect, analyze, and present data on authentic Vojvodina Hungarian linguistic practices, specifically examples of translanguaging. However, it did shed light on what the questions should and should not focus on, which areas of linguistic practices can be safely ignored, and which should be foregrounded in the present dissertation, and most importantly, the study also helped in the process of minimizing and refining the research questions and the overall focus of the research project. As a result of this initial project, two particular research instruments were sought out and adapted to fit both the Vojvodina Hungarian population, as well as the current trends in research into digital spaces: first, Lee's 2014 techno-biographical interviews, which serve the purpose of broadening our understanding of the roles digital devices and media play in the lives of internet users. This instrument also allows us to learn about how people's digital habits change over time, and how their experience continuously shapes and influences their linguistic practices and identities. The second is Helsper and Eynon's Digital Nativeness test that was developed in 2010, also discovered during this process. This test is greatly useful as it takes into account much more than just the birthyear of an individual when determining the extent of one's Digital Nativeness. In light of the above, the following sections introduce the final form of the implemented methodology and research questions, while also discussing the study's participants, data collection process, and data analysis.

4.2. Final form of the implemented methodology

To collect the data for the dissertation itself, a questionnaire and a semi-structured interview were chosen as the main data collection methods, and data was collected with them between mid- to late 2024 and early 2025. The study employs a research design that is based on method and data triangulation (cf. Campbell and Fiske 1959; Webb et al. 1966; Carter et al. 2014). As Webb et al. (1966: 3) contend, "if a proposition can survive the onslaught of a series of imperfect measures, with all their irrelevant error," "the uncertainty of its interpretation is greatly reduced," which in turn makes the data much more valid than if we approached the same phenomenon from only a qualitative or quantitative perspective. Based on Denzin's (1978)

distinction, the present study employs a between-methods triangulation instead of a within-methods triangulation, considering that it involves both qualitative and quantitative approaches to study the same phenomenon. Scholars also often refer to this approach as mixed-methods research, which Johnson et al. (2007: 123) define as the combination of qualitative and quantitative research elements "(e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration." The main reason why triangulation is indispensable for the present study is because it deals with a complex phenomenon (i.e., the intersection of Digital Nativeness and multilingualism in a minority context) that has not yet been approached, especially not in the context of Vojvodina, which makes the data collection tools unreliable.

While the questionnaire aimed to collect mainly quantitative data on Vojvodina Hungarians' digital and linguistic practices, the interviews were designed to enrich and extend the quantitative data with qualitative data through asking the participants questions that would elicit more individual life stories in relation to technology and language (i.e. techno-biographies adapted from Lee's 2014 study). A revised version of the original preliminary questionnaire was created, where the main change took place within the section that contained questions about digital practices (see Appendix 3, *Part 2*). It should be noted that the questionnaire primarily reached the more educated and digitally active part of the Vojvodina Hungarian community, as the final dataset was a quota-based sample based on age and gender. The preliminary study was vital in this process as it pointed out that certain questions were distracting and shifted the focus away from the dissertation's intended core topic. Due to this, some questions have been removed (such as Questions 9, 10, 14–18b, 32, 33–39, 42–43 in Appendix 1), while some have been combined with ones that were similar, to avoid repetition and to make the process of filling out the questionnaire as short and seamless as possible. Regarding the section on digital habits and preferences (Appendix 3, *Part 3*), the old questions were replaced with more precise questions that were adapted from Helsper and Eynon's 2010 Digital Nativeness test, but the information they were meant to elicit was very similar in nature, if not identical. To some extent, the structure of the interview followed that of the questionnaire's, although it was meant to extend and enrich the data that was already shared by some of the same participants from the questionnaire of the preliminary study, only this data was meant to be qualitative, more focused, and more individual.

The goal was to have at least 100 participants per age group fill out the questionnaire, ideally with 50 male and 50 female participants to see if there might be any gender-related

differences in terms of linguistic and digital habits. The six established age groups were as follows: under 18, 18–25, 26–35, 36–45, 46–55, over 55. To extend this data, interviews with at least 3–4 individuals from each of the six established age group were also planned. During the first data collection period, those who filled out the questionnaire for the preliminary study and wished to give an additional interview on similar topics were able to leave their email addresses or phone numbers at the end of the questionnaire. Prior to setting up a time for the interviews, participants were informed that if they had the chance and wished to, they could share their own examples (screenshots) of translanguaging from their own conversations online with friends and family if all members of the given conversation had given their consent. Therefore, the message or email they received asked them to look for instances in their messages where they used more than one language and take a screenshot of it if they decided to share any during the interview session. Ideally, the interviews would not only consist of asking participants about their digital and linguistic practices in general. The interview sessions were planned to give participants the chance to explain their chosen messages and the contextual background behind the screenshots, while also asking them about the reasons they chose to engage in translanguaging in those situations. This would hopefully eliminate any potential misinterpretation from the side of the researcher as well as misunderstandings between the participants and the researcher.

4.3. Research questions, hypotheses, and expectations

The present section outlines the research questions and discusses how they will be answered and simultaneously presents the hypotheses and expectations that have formed partly based on the preliminary study and partly based on the findings of previous studies discussed in Chapters 2 and 3. In light of the above, four research questions were developed along this process, which are listed below.

Research Question 1: To what extent do Vojvodina Hungarians exhibit characteristics of Digital Nativeness?

The hypothesis for Research Question 1 is largely based on findings from previous studies carried out in various areas of the world and presents a more general view, as the concept of Digital Nativeness has not yet been approached in the Vojvodina Hungarian context explicitly.

Although the preliminary study did not specifically deal with defining and identifying Digital Nativeness in depth, the answers to questions about digital presence and digital activities nevertheless provide valuable insight. Based on the results of the preliminary study, younger groups (under 18, 18–25, 26–35) are expected to be more likely to exhibit characteristics of Digital Nativeness as defined by Helsper and Eynon (2010) due to their higher exposure to digital devices and digital spaces. The findings of other studies (Tapscott 1998; Helsper and Eynon 2010; Teo 2013; Akçayır et al. 2016; Nedeljković et al. 2016; Savić et al. 2023; Csiszárik-Kocsir 2024) also suggest a similar outcome, namely, that Generation Z (born between mid- to late 1990s and the early 2010s, i.e., aged roughly between 15 and 30) and younger generations following it will exhibit stronger characteristics of Digital Nativeness than older generations. Although, at the same time, Digital Nativeness is not entirely expected to be solely determined by birthyear (Helsper and Eynon 2010; Hargittai 2010; Teo 2013; Correa 2016; Jarrahi and Eshraghi 2019; Reid et al. 2023). Instead, a variety of other factors (experience, personal preferences, and the nature and breadth of internet use) in combination with birthyear are expected to influence the degree of one's Digital Nativeness. In addition to these factors, two novel elements will also be considered: an individual's confidence in their internet and digital skills and their tendency to multitask (also in Ransdell et al. 2011; Teo 2013), as these are also strong indicators of whether an individual is digital oriented or prefers more traditional methods for seeking information or carrying out different tasks. Furthermore, consistent with Helsper's (2021) findings on digital inequalities, it is not assumed that all younger individuals will exhibit these characteristics to the same degree, nor is the possibility that older generations could exhibit some degree of them excluded (Deák et al. 2024).

Research Question 2: In what ways do higher degrees of Digital Nativeness impact language choices and attitudes towards translanguaging among Vojvodina Hungarians?

Similarly to the preceding Research Question 1, the hypothesis for Research Question 2 is also in large part based on the findings of previous studies, and to some extent, based on the findings of the preliminary study. As explained above, the preliminary study showed that younger generations are noticeably more digital-oriented and digitally active in their day-to-day lives than the 46–55 and over 55 age groups, and also tend to choose more English in digital settings as opposed to older generations. On the other hand, Hungarian is still very often the primary choice of language for all generations in most settings, and overall, translanguaging is

generally accepted by the participants. Based on these findings, similar results are expected in terms of language choices and the Vojvodina Hungarians' general attitudes towards translanguaging. The findings of an earlier study by Nightingale and Safont (2019) showed that translanguaging is quite common among adolescents, who exhibit higher degrees of Digital Nativeness. Their language choices and translanguaging practices in various online situations indicate that they are very intentional and goal-driven, instead of just occurring randomly. Based on these findings along with the insights from the preliminary study, the present study expects the following: those individuals, who exhibit higher degrees of Digital Nativeness will be more likely to choose English in digital settings more frequently, and they will also be more likely to engage in translanguaging with a specific purpose or goal in mind instead of just practicing it randomly.

Research Question 3: For what purpose and how do Vojvodina Hungarians use their languages in digital spaces?

Based on earlier studies (Paricio-Martín and Martínez-Cortés 2010; Cunliffe 2019), communication and community building are the most expected reasons influencing the Vojvodina Hungarians' language practices in the present dissertation. Combining these outcomes with the results of the preliminary study, aside from communicative purposes, Vojvodina Hungarians will most likely use their languages in digital spaces to maintain their cultural and local ties and to create a sense of community and belonging with their friends, family, and fellow Vojvodina Hungarians. Considering that in the preliminary study the Vojvodina Hungarian participants' general attitudes towards translanguaging ranged between neutral and positive, their online interactions are expected to include more of their spoken languages instead of just one (their first language). While Hungarian will most likely be the main choice in most contexts, English is expected to be more prevalent in the linguistic practices of younger generations as opposed to Serbian (also based on the outcomes of the preliminary study). Translanguaging is also highly expected to be characteristic of their digital linguistic practices, however, it is more likely to occur in informal private messages or group chats as opposed to messages in more formal contexts. These expectations are partly based on the findings of previous studies (Canagarajah 2017; Aleksić and García 2022) that highlighted how translanguaging is still stigmatized in various public, formal, and multilingual contexts, but they are also based on the results of the preliminary study, which indicated that there might be a

generational difference (older generations being less tolerant) when it comes to the acceptance and practice of language mixing in more professional settings. Nevertheless, neither is the idea of translanguaging being present in more professional settings excluded based on Räisänen's 2018 findings.

Research Question 4: What factors influence the linguistic practices of Vojvodina Hungarians in digital spaces, particularly in terms of language choices and translanguaging?

Based on the preliminary study, the linguistic practices of Vojvodina Hungarians are most likely influenced primarily by context and function. More precisely, the findings suggest that the language(s) encountered on websites will be the most decisive factor, while personal (linguistic and cultural) background might not be as influential. Their language choices and translanguaging practices will, however, most likely be context dependent.

Based on the findings of previous studies (Bornman 2003; Kelly-Holmes 2004; O'Carroll 2013; Lee 2014; Molyneaux et al. 2014; Androutsopoulos 2015; Lee 2016; Belmar and Glass 2019), the most expected factors influencing their linguistic practices in digital spaces are personal, cultural, and linguistic. Because people have different goals, values, and interests, their linguistic practices might end up being influenced by entirely different factors. Their language choices and translanguaging practices might turn out to be the outcomes of multiple factors intersecting as well, which might include: the desire to express one's cultural and local identity (Kelly-Holmes 2004; Lee 2014; Androutsopoulos 2015; Belmar and Glass 2019), address a specific audience or exclude another, the desire to conform to worldwide trends and use the lingua franca (Durham 2007; Lee 2014), the topic of discussion or the language(s) appearing on the given platform (Li 2011; Androutsopoulos 2015; Aleksić and García 2022), the presumed linguistic repertoire of the interlocutor (Lee 2014), and even one's own perception of their competences in their spoken languages leading them to choose the one(s) they speak best (Durham 2007; Lee 2014), or the exact opposite: avoiding certain languages due to bad experiences. Looking at this list, the expectations are as follows: the linguistic practices of younger audiences will more likely be influenced by languages' popularity and the desire to follow worldwide trends (Durham 2007; Lee 2014), as opposed to older generations. Here, English is most certainly expected to be the choice of language in digital communication among younger generations of Vojvodina Hungarians. The language(s) of a website or topic, as well

as the desire to address a particular group or community of people are factors that will most likely be true for most of the Vojvodina Hungarians.

Lastly, based on the preliminary study, English and Hungarian are expected to be most frequently chosen as the language of communication online as opposed to Serbian, and these choices will most likely be influenced by the language these participants encounter online rather than their own linguistic background. However, the opposite outcome is not excluded either: while there is a growing presence of digital content in more widely spoken languages, particularly English, this might paradoxically strengthen one's sense of cultural, national, linguistic, and local identity, and possibly encourage more participation in both local and virtual settings, motivating internet users to choose their first language(s) over English (Bornman 2003; Kelly-Holmes 2004; Androutsopoulos 2015; Belmar and Glass 2019).

The four research questions were intended to be addressed in a linear manner, as each subsequent question relied on the findings of the one before it. Once the data was collected via interviews and the final questionnaire, the first step was to establish the extent of the participants' Digital Nativeness. To ensure that the adapted scale by Helsper and Eynon (2010) was valid for the present research, an Exploratory Factor Analysis (EFA) was first conducted on the 16 items of the Digital Nativeness Scale. The analysis confirmed that the data was suitable for factor analysis (Kaiser-Meyer-Olkin Measure = 0.664; Bartlett's Test significant at $p < 0.001$), and while it suggested multiple underlying dimensions, the decision was made to keep as close to the original (Helsper and Eynon 2010) for comparative purposes. These results were further supported by the scale's acceptable internal consistency, as Cronbach's Alpha (α) was 0.628.

The Digital Nativeness Score was created in SPSS 26, which involved calculating a composite score by summing the relevant variables (see 4.5.2 for exact variables) from the questionnaire. Once this score had been created, Research Question 1 could be addressed. Following this, independent samples *t*-tests and Pearson correlation analyses were done to explore potential connections between higher degrees of Digital Nativeness and language preferences and attitudes towards translanguaging. These analyses provided valuable insight into their habits and preferences, making it possible to answer Research Question 2 in detail. On the other hand, the qualitative data via interview transcripts and notes taken during the interviews not only provided valuable insight into the Vojvodina Hungarians' digital language practices but also offered an analysis of specific instances where participants engaged in

translanguaging knowingly. Lastly, Research Questions 3 and 4 could be addressed as an even deeper understanding of the participants' language choices and linguistic practices was gained through their shared personal anecdotes.

4.4. Qualitative data collection and analysis: Interviews

The section of the research project that focused on collecting qualitative data invited Vojvodina Hungarians of all ages, genders, and occupations to tell their stories and share their experiences in semi-structured interviews, mainly inspired by the results of Lee's (2014) techno-biographical approach. Initially, 21 individuals signaled that they might wish to give additional interviews, however, in the end, only 15 Vojvodina Hungarians gave interviews from the same group of participants who filled out the questionnaire used for the preliminary study. The other 6 individuals who originally signed up for the interview decided against it for two main reasons after receiving a few details about the interview. While some expressed that they did not wish to talk about their linguistic practices, especially translanguaging, openly, the others felt they did not engage in enough translanguaging to be able to talk about it in detail.

The interviews were done in 12 one-on-one sessions and one group interview with a group of 3 friends, who were also coworkers. All of the interviews were conducted in Hungarian and, therefore, all quotes that appear in the following sections are provided in their original Hungarian form (which are all italicized) along with their English translations. Many of the quotes contain words and phrases that were originally said by the participants in either **Serbian** (these instances are **bolded**) or <u>English</u> (these instances are <u>underlined</u>), and some of these also include translanguaging (Éva (2), Emina (4), Gábor (5), Emina (6), Jana (7), Dorottya (11), Gábor (12)). Additionally, a few excerpts also contain words and phrases that have become well-established loanwords in the Hungarian lexical repertoire of Vojvodina Hungarians over time, and these are also indicated in the respective excerpts to distinguish them from instances of translanguaging. The interview data collected was analyzed individually, and emergent themes were established. To contextualize and analyze the participants' statements and explanations for their language choices and linguistic practices on a deeper level, the study also relied on Gal and Irvine's (2019) axis of differentiation, and the three semiotic processes of iconization, fractal recursivity, and erasure (as discussed in 2.1.1). This approach was used to look beyond what the participants said in order to examine how their linguistic practices are ideologically reconciled with the ideological construction of named languages.

As mentioned above, some of the questions and sections of the original questionnaire were adapted to the interview format, however, the interviews were much more flexible in nature as the questions and sections served only as a guide during the interview sessions that took 30–40 minutes on average. The participant selection happened voluntarily from the side of the participants, just as in the case of the first questionnaire that was shared on Facebook and other social media sites like Instagram and Reddit, where anyone could fill the questionnaire out and also signal at the end of the questionnaire if they wished to give an additional interview with similar discussion topics. As mentioned above briefly as well, those who decided to give interviews could leave either a contact email, phone number, or a link to their social media page where they were later on contacted to arrange an online interview session via Facebook Messenger, Instagram call, or any other platform they were comfortable using. The only criteria were that the participants were from Vojvodina, and (one of) their first language(s) was Hungarian. The 12 one-on-one interviews were done separately and at different times, and since not all of the interviewees felt comfortable being voice recorded, only those interviewees who gave their consent at the beginning of the call were voice recorded (9 individuals), and once the audio files had been transcribed, they were deleted. To ensure that participants remained as anonymous as possible, the transcripts, shared screenshots, and the notes from the unrecorded interviews were reviewed and all personal or potentially revealing details were removed. The section of the interview during which they talked about their screenshots was not recorded mainly because it was the most sensitive segment (seeing as they were sharing much more personal information discussing their private conversations), but to also alleviate the pressure of being recorded a little, hoping to elicit more honest answers from them.

Like the questionnaire itself in the preliminary study, the interview was divided into a few sections, where each section covered a different discussion topic (see Appendix 2). The interview included a few questions about the participant's background (their age, gender, educational background, and employment status), and they were also asked to briefly talk about their linguistic background. The interviews were formulated with some of the same questions and topics and were semi-structured in nature to give participants more freedom and opportunity to express their attitudinal standpoints, share their digital and linguistic habits (Appendix 2, sections *B* and *C*), and their overall experience with linguistic practices and social media in the Vojvodina Hungarian setting (Appendix 2, section *D*). As stated previously, the most notable difference between the questionnaire and the interview was that the interview integrated Lee's (2014) techno-biographical approach, which aimed to elicit data on

participants' stories with digital devices, the internet, and social media (Appendix 2, section *B*), but also accentuating the roles of languages in digital spaces. Therefore, in section *C* (see Appendix 2) the participants were asked to talk about their experiences with technology and languages online over time. The goal of this session was for them to compare their experiences with technology and languages appearing and being used online in the past to the present to have a better understanding of digital and linguistic habits and preferences, as these might potentially point out certain connections between past experiences and preferences and standpoints in the present in terms of language and technology.

4.4.1. Interview participants

Overall, the 15 participants who were interviewed were of various backgrounds, ages, and had varying digital habits. All interviewees were given random pseudonyms for easier identification within the dissertation and to also ensure their anonymity. In the preliminary study, 6 age groups had been established (under 18, 18–25, 26–35, 36–45, 46–55, over 55) in order to more easily recognize any potential age-based differences that might arise regarding digital habits, shared experiences, and linguistic habits. While I did not have the chance to interview individuals under the age of 18, there were 4 participants from the second youngest age group (18–25) who volunteered to be given additional interviews. Another 4 individuals were from the 26–35 age group, 3 from the 36–45 age group, 2 people from the 46–55 age group, and another 2 were over 55 years of age.

The youngest group of participants included Dávid, Dorina, Dorottya, and Dániel, who were between the ages of 18–25 and were all from Subotica/Szabadka. They all had similar digital habits in terms of active online participation, all attended university and were in the following fields: Dávid was studying education at the University of Szeged, Dorina was studying art also at the University of Szeged, while Dorottya was studying IT at the same university, and lastly, Dániel was studying biology at the University of Novi Sad.

Another 4 participants from the second youngest group (26–35) were Emese from Vrbas/Verbász, and a group of friends who used to attend the same university: Emina, Gábor, and Jana. While Emese was in her third year of IT studies at the University of Novi Sad, Emina, Gábor, and Jana were working in the same bank located in Subotica/Szabadka and also used to study business at the University of Novi Sad. As they explained, Emina and Jana were friends

prior to working together at the same bank, while Gábor became their good friend not long after Jana and Emina started working together.

Erika, Éva, and Endre were another 3 participants who were interviewed and were aged between 36–45, and they were working full-time in Vojvodina, Serbia. Erika had a high school diploma and was working as a sales assistant at the time of the interview in Horgoš/Horgos, Éva had a bachelor's degree in business and administration, and was working at an administrative office in Subotica/Szabadka, while Endre had a master's degree in psychology and was working as a psychologist in Novi Sad/Újvidék.

The last four participants were Luca and Levente, who belong to the 46–55 age group, and Liza and Leon who were over 55. While Luca had a high school diploma and was working as a nail technician in Novi Sad/Újvidék, Levente finished vocational school and was a car mechanic in Kikinda/Kikinda. On the other hand, Liza attained her master's degree in education at the University of Novi Sad and was a high school teacher in Zrenjanin/Nagybecskerek, and Leon held a PhD and was a retired private investigator in Subotica/Szabadka.

All of the interviewees are ethnically Hungarian, speak Hungarian as an L1, some also speak Serbian very well (Leon, Liza, Gábor, Emina, Jana, Endre, Erika, Éva, Emese, and Dániel), 9 of them (Gábor, Emina, Jana, Dániel, Dávid, Dorottya, Dorina, Emese, and Endre) speak English as an additional language. While some mentioned Serbian as their second language (Emina, Jana, and Dániel), they all consider Hungarian as their first language along with the rest of the interviewees whose first language is Hungarian. The participants own at least two to three digital devices, mainly smartphones, smart TVs, and a PC or a laptop. They also shared that they have constant internet access and spend up to 5–6 hours on the internet daily, during which they consume various social media, with Facebook being the most popular among older generations, and Instagram being somewhere in the middle as it is used mostly by those between 25 and 45. On the other hand, using TikTok was described as an activity that is deeply rooted and integrated into the daily routines of those belonging to the age groups of 18–25 and 26–35, and is especially prominent in the routines of the youngest, under 18 participants. The participants also shared that they tended to communicate (mostly using Facebook Messenger, Instagram, and Viber) and look up information on the internet much more frequently nowadays as opposed to 10–15 years ago, when their main source of information was television, radio and newspapers, or they had to seek information through more traditional and face-to-face methods.

4.4.2. Data collection of translanguaging examples

As outlined above, the interviews did not only intend to gain insight into the Vojvodina Hungarian participants' experience with technology and languages over time, but also served the purpose of collecting authentic translanguaging examples from their own conversations as well as explanations from the side of the participants. Almost all of the shared screenshots were from private messages, as the participants did not generally write posts on Facebook aside from sharing photos and occasionally leaving comments under others' posts. Similarly to the findings of the preliminary study, the 15 interviewees said that in general they tend to be more passive consumers of social media instead of active creators. As expected, not all of the 15 participants decided to bring examples of translanguaging from their digital interactions and conversations. While Dávid and Emese did not find it comfortable to share private messages, the others either could not find any, or did not know how to look for them in their messages aside from scrolling back and not being able to find any. Nevertheless, they still spoke about their experience with translanguaging during the interviews. In the end, 5 participants did not bring any examples of their own to the interview, while some brought 1 or 2. Some participants said they simply scrolled through their messages, while others mentioned they used the 'Search in conversation' function on Messenger or Instagram to look for specific words they tend to use, such as *ajde* "come on" or *omg*, *dude*, or *same* in Emina's case for example. With the exception of Levente who asked his daughter for help, the rest of the participants who shared some screenshots knew how to take one. The total number of shared screenshots by the participants was 16 (2 provided by Dorina, 2 by Dániel, 2 by Dorottya, 2 by Emina, 1 by Gábor, 1 by Jana, 1 by Endre, 2 by Luca, 2 by Levente, and 1 by Leon). Dorina was the only participant who brought two different examples: one of her older public posts from a larger Facebook group and one from her private Messenger conversation with friends, which made it possible for her to compare and discuss the reasons behind her linguistic practices and language choices in these two very opposite situations and contexts.

4.5. Quantitative data collection and analysis: The final form of the questionnaire

The main source of data collected for the present dissertation was possible with the help of an online Google Forms questionnaire, which was created and shared on various social media platforms (these included Facebook and Messenger, Instagram, and Reddit) in late 2024 and early 2025. This final version of the questionnaire included questions on participants' general

backgrounds, experience with technology, linguistic and digital habits, and translanguaging. Like the preliminary questionnaire, the final one was also comprised of different sections, each focusing on a separate area listed above. The participants were asked to share their experience with technology, including how frequently and in what ways they used digital devices and virtual platforms to see to what extent participants are involved in these digital activities. The 12 online activities established by Helsper and Eynon (2010: 507) were the following: training/studying, e-government, entertainment, finance/e-banking, fact-checking/looking up information, current affairs/interests, travel, shopping online, social networking, diary functions, person-to-person networking, civic participation – i.e. online forums more specifically. Regardless of Helsper and Eynon's (2010) test being originally created over 10 years ago, it can still elicit in-depth data on Digital Nativeness when adapted to current trends in technology and media. The section that particularly focused on the participants' digital habits was a contemporary adaptation of Helsper and Eynon's (2010) Digital Nativeness test (see Appendix 3 for exact questions used), and aimed to provide a clear picture of the frequency and the type of digital activity participants usually participated in, how long they have been doing things on the internet, and whether they usually multitasked (e.g. listen to music while messaging friends as well as studying or doing household chores). These questions were simple and aimed to gather data on participants' recent digital activities, the number of regularly used digital devices they owned, a self-report on their confidence regarding digital skills, but they were also asked about their preferences when looking up information and communicating.

Previous studies (Prensky 2001; Helsper and Eynon 2010; Teo 2013; Akçayır et al. 2016) have established that there is a combination of factors and activities that are characteristic of Digital Nativeness. Apart from the birthyear of the individual (those born after 1980 being most often associated with Digital Nativeness), individuals who exhibit higher degrees of Digital Nativeness are regularly assumed to process and access information differently, preferring digital, quick, and visual information as opposed to non-virtual, written, and longer pieces of information. They are also believed to be more likely to engage in multitasking regularly, and "thrive on instant gratification and rewards" (Akçayır et al. 2016: 435). While digital skills and new technologies can be learnt and acquired by anyone, even those individuals who are described as Digital Immigrants born before a highly digital world, Prensky (2001) argues that the level of knowledge and skills they may acquire could never close the ever-widening gap between the two groups of Digital Natives and Digital Immigrants due to their social, technological, historical, and cultural backgrounds (Prensky 2001). Therefore, based on these,

Helsper and Eynon's (2010) three factors are foregrounded in the present study as the most decisive: age (1980 being the dividing birthyear), experience, and breadth of use. The factor of experience is going to be portrayed by frequency of internet use and one's confidence in their own internet and digital skills, while the breadth of use is about how integrated the internet and digital activities are in the lives of participants, including multitasking and primary source of information. Therefore, to give an account of their breadth of use even more extensively than was done in Helsper and Eynon (2010), the study takes into consideration whether participants tend to multitask, what their primary source of information is, and how many of Helsper and Eynon's (2010) 12 established activities they did the week prior to filling out the questionnaire.

Additionally, participants were asked to answer a range of questions related to their language choices in various contexts, particularly in virtual spaces, and to also provide some general information about their linguistic background and environment. This approach aimed to capture a broad spectrum of experiences and perspectives, ensuring a rich understanding of their digital and linguistic behaviors. It is also necessary to clarify that while the questionnaire was shared on social media platforms, ensuring that all participants who filled it in were users of the internet, this does not mean that they automatically fall into the group of individuals, who exhibit high degrees of Digital Nativeness.

4.5.1. Participants of the questionnaire

The online questionnaire was filled out by a total of 693 Vojvodina Hungarians from a diverse range of age groups, occupational backgrounds, educational history, and genders, however, only 600 were selected and kept from the original total as some of the responses were incomplete, and the main goal with these was to ensure equal distribution among age groups as well as genders. In the end, the selected responses for analysis were those of 300 male and 300 female individuals. In each established age group there remained 100 participants, 50 male and 50 female. To control and reach this final number of participants per age group and gender, the social media posts about the questionnaire were re-shared multiple times asking for specific age groups and genders to fill it out.

Information on both the place of birth as well as the participants' current place of residence was collected, which showed that 44% (264 participants) were born in the geographical region of Bačka/Bácska and 36% (215 participants) were living in Bačka/Bácska at the moment of filling in the questionnaire. Regarding the geographical region of Banat/Bánát,

54% (323 participants) were born there, while 53% (317 participants) were still there. While the categorization of the geographical regions here is based on the current delineation of the official administrative regions, it also needs to be acknowledged the important role traditional and historical boundaries play in the identity construction of the Vojvodina Hungarians residing in this region. Specifically in the case of Senta/Zenta, it has long been considered part of Bačka/Bácska by the residents as it is on the west side of the river Tisza and due to this, they may identify more closely with Bačka/Bácska than Banat/Bánát. Unfortunately, the questionnaire did not include an additional question asking participants to select the geographical region to which their settlement belongs. This would have been a very valuable addition to see how the participants view these boundaries and identify themselves, and how their views are reflected in their linguistic practices. Additionally, a total of 2 participants (0.3%) were born in the geographical region of Srem/Szerémség and 11 participants (2%) were born abroad (mainly Hungary) but lived in Vojvodina, while 11.5% (69 participants) lived abroad at the time of filling out the questionnaire. The majority (468 participants, 78%) of the Vojvodina Hungarians see themselves as Hungarian in terms of nationality, some as Serbian and Hungarian (126 participants, 21%), while the remainder (1%) selected Yugoslav, Serbian, and even Swiss. Regarding the participants' highest level of education at the time of filling out the questionnaire, of the 600 participants, 41% (249 participants) have a high school diploma, 21% (124 participants) have a bachelor's degree, and 21% (124 participants) have an elementary school diploma. Another 14% (85 participants) hold a master's degree or higher, and 3% (18 participants) have an associate degree. Additionally, their answers revealed their vocation and their current job status, which had the following results: 52% (310 individuals) work a daytime job and regularly go to work, 12% (69 participants) of the participants work from home, 23% (136 participants) are still in school (this category includes the 100 participants from the first age group, i.e. those under the age of 18), 9% (51 participants) are retired, and 6% (34 participants) are unemployed or looking for a job. At a closer glance, those who are working (350 participants) tend to work mainly in business, finances, and sales (34%, 206 participants), and the public sector and services (14%, 83 participants). Another 5% (33 participants) work in health and social care, while the rest are in hospitality and tourism (2%, 12 participants) as well as agriculture (3%, 16 participants).

4.5.2. Questionnaire data analysis

In order to analyze the gathered data, the questions that could be numerically expressed were analyzed with the help of Excel's Data Analysis functions in combination with SPSS version 26 for correlation analyses, independent samples *t*-tests, and descriptive statistics. The questionnaire data was first and foremost used to calculate a Digital Nativeness Score in SPSS 26 to establish the extent of the participants' Digital Nativeness. This was done through calculating a composite score by summing the relevant variables from the questionnaire. First, those questions that were not initially binary (0–1) coded had to be re-coded. The Digital Nativeness Score was comprised of the following variables: first source of information, multitasking, confidence in internet and digital skills, frequency of internet and device use, and breadth of recent use (referring to the 12 digital activities established by Helsper and Eynon in their 2010 study). With the exception of participants' tendencies to multitask and engage in the 12 digital activities (as these variables were already binary coded), all responses to the other questions had to be re-coded into a 0–1 scale. Given that the goal was to calculate a Digital Nativeness Score, the "first source of information" variable was re-coded, which originally contained four options for information seeking (e.g., turning to AI, Google, ringing a friend, or visiting a friend or neighbor first). In the recoded version, *1* indicated turning to AI or Google first, while *0* represented the more traditional information-seeking tendencies. The "confidence in internet and digital skills" variable, which was originally measured on a 1–5 scale, was also re-coded, however, this one was transformed into a continuous score ranging from 0 to 1 as it is a more precise representation of the data. Similarly, the variable for "frequency of internet and device use", originally containing four options (e.g., daily, 3–4 times a week, once a week, less than once a week), was re-coded into *1* indicating daily use, and *0* indicating the rest of the options.

Therefore, the final Digital Nativeness Score represented a composite score out of a possible 16 points which were chosen based on the findings and insights of previous studies that focused on exploring the characteristics of Digital Nativeness (Helsper and Eynon 2010; Ransdell et al. 2011; Teo 2013; Helsper 2021). In order to make a comparison, the continuous 16-point Digital Nativeness Score was divided into two groups using the median as the cut-off point. The median score was found to be 10.75, and therefore, based on the degree of digital engagement and involvement, those participants who scored 10.75 and above were classified into group 1 (DN1, N=327, 54.5%), which meant that they exhibited higher degrees of digital engagement (i.e., Digital Nativeness), and those who scored below 10.75 were classified into

group 0 (DN0, N=273, 45.5%) for the sake of comparison. This new variable was then used as the grouping variable for the independent samples *t*-tests to compare mean differences across various demographic factors (i.e., age, educational level, employment status, gender), other digital habits related to social media, self-assessed language proficiency, attitudes towards translanguaging, and language choices in a variety of digital and face-to-face contexts to cover all possible areas where differences could arise. The two groups (DN1 and DN0) were also compared using Chi-Square tests of independence to examine the distribution of demographic and socioeconomic factors. Additionally, Pearson correlation analyses were conducted to explore potential connections between higher degrees of Digital Nativeness and language preferences and attitudes towards translanguaging. Lastly, the remainder of the questions that could not be numerically expressed were individually analyzed and emergent themes were established per question and compared with the interview data where topics overlapped.

5. Results and Discussion

The present chapter is divided into three main sections: first, the collected and analyzed quantitative data is presented and Research Question 1 (To what extent do Vojvodina Hungarians exhibit characteristics of Digital Nativeness?) is addressed. The subsequent section (5.1.1) then moves on to addressing Research Question 2 (In what ways do higher degrees of Digital Nativeness impact language choices and attitudes towards translanguaging among Vojvodina Hungarians?) and discusses the findings based on the data collected via questionnaire. At this point, the chapter shifts the focus away from the quantitative data over to the qualitative data and through analyzing the interview data, subsections 5.2 and 5.3 explore Research Question 3 (For what purpose and how do Vojvodina Hungarians use their languages in digital spaces?). Simultaneously, Research Question 4 (What factors influence the linguistic practices of Vojvodina Hungarians in digital spaces, particularly in terms of language choices and translanguaging?) is also addressed (subsection 5.2.3) by comparing the collected qualitative and quantitative data. Lastly, a crucial element of the present dissertation is also addressed at this point: the demonstration and analysis of the translanguaging examples the participants shared and explained during the interview sessions. Some parts of the present chapter have been previously published in Kostic (2025a, 2025b).

5.1. Quantitative perspective: Digital Nativeness and content creation among Vojvodina Hungarians

To address Research Question 1, it is necessary to reveal the extent to which the current population of Vojvodina Hungarians exhibit characteristics of Digital Nativeness. As established previously, when looking at the characteristics of Digital Nativeness, it is not enough to solely focus on age, but to consider age in combination with other factors as well (Helsper and Eynon 2010; Helsper 2021) to gain a better understanding of the wider context as well. For this reason, age, gender, employment status, as well as educational background were taken into consideration and checked for correlation and tendencies with a few variables, such as experience with the internet (years of contact, devices, and general habits), breadth of use (Helsper and Eynon 2010), multitasking tendencies, and also self-reported confidence in internet and digital skills.

As mentioned above in the previous chapter, for the sake of comparison, it was necessary to establish a distinction between individuals who exhibited higher vs. lower degrees of digital engagement (i.e., Digital Nativeness). With this new variable (where the DN0 group is made up of those participants who exhibit lower degrees of digital engagement and the DN1 group represents those who are much more digitally engaged), an independent samples *t*-test and Pearson correlation analysis were conducted. The *t*-test revealed that there is a statistically significant difference between these two groups (DN0 and DN1) across a few variables (see Table 1). The results indicate that the DN1 group was significantly younger, reported higher confidence in their own internet and digital skills, owned more digital devices, and had internet access in more places than the DN0 group.

Table 1. Results of the independent samples *t*-test comparing the two groups: DN0 and DN1.

Variable	DN0 mean	DN1 mean	Mean Difference	*t*	*p*-value
Age (range: 1–6)	4.07	3.02	1.045	7.716	< 0.001
Number of devices	1.82	2.32	-0.501	-7.107	< 0.001
Confidence in internet and digital skills	3.21	3.99	-0.778	-8.280	< 0.001
Frequency of social media use	1.48	1.85	-0.367	-8.843	< 0.001

Furthermore, the correlation analysis confirmed that there is a strong, significant negative correlation between age and variables related to digital skills, which indicates that as age increases, digital skills decrease (see Table 2).

Table 2. Results of the Pearson correlation analysis between age and digital habits.

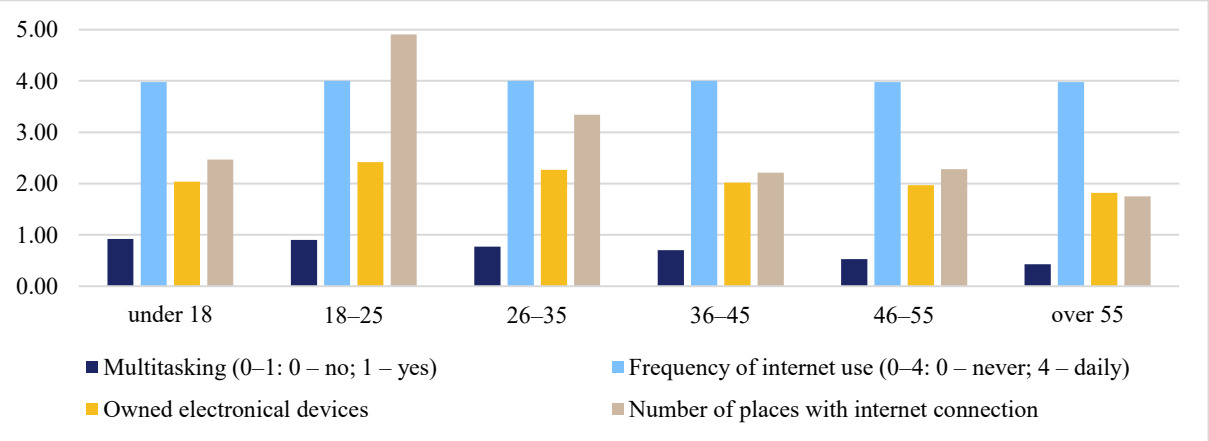
Variable	Correlation with age (r)	*p*-value
Confidence in internet and digital skills	-0.673**	< 0.001
Number of devices	-0.145**	< 0.001
Frequency of social media use	-0.492**	< 0.001

The two groups (DN1 and DN0) were also compared using Chi-Square tests of independence to examine the distribution of demographic and socioeconomic factors, which revealed significant differences in a number of cases. The results showed that educational background and employment status have significant effect on Digital Nativeness, while gender does not (χ^2 (1, N = 600) = 2.964, p = 0.085). The DN1 group was significantly more likely to have degrees in higher education. For example, 23.9% of the DN1 group and 16.8% of the DN0 group held bachelor's degrees (p = 0.035), 21.1% of the DN1 group and 5.9% of the DN0 group held master's and PhD degrees (p < 0.001). In terms of their employment status, the individuals

belonging to the DN1 group were significantly more likely to be students (26.6% as opposed to the DN0 group with 17.9%, $p = 0.012$). On the other hand, the DN0 group was significantly more likely to be retired (13.9% vs. 4% of DN1, $p < 0.001$), which simultaneous points out that retirement and being older does not necessarily rule out the possibility of one being part of the DN1 group (as was also found by Deák et al. 2024). Lastly, a significant difference was found in terms of nationality, as 31.5% of the DN1 group claimed to be both Hungarian and Serbian, while only 9.9% of the DN0 group did ($p < 0.001$). Like in previous studies (Helsper and Eynon 2010; Teo 2013; Helsper 2021; Deák et al. 2024), these findings also indicate that Digital Nativeness does not solely rely on age and digital skills but is also affected by other demographic and socioeconomic factors.

The second section of the questionnaire specifically focused on raising questions and topics related to digital devices, information seeking tendencies, general questions in connection with the internet (including social media knowledge and use), and the participants' overall digital habits and preferences. Figure 2 (see also Appendix 5, Table 18) shows each of the 6 age groups and their averages in a variety of situations, including whether they multitask or not (range: 0–1; 0 – does not engage in multitasking, 1 – does engage in multitasking), how frequently they use the internet (range: 0–4; 0 indicating that they never use it, while 4 indicates that they use it daily), how many digital devices they own, and lastly, the number of places with internet access (the ranges in this and the previous case are not limited).

Figure 2. Averages regarding digital devices, frequency of internet use, multitasking, and number of places with internet access based on age groups.

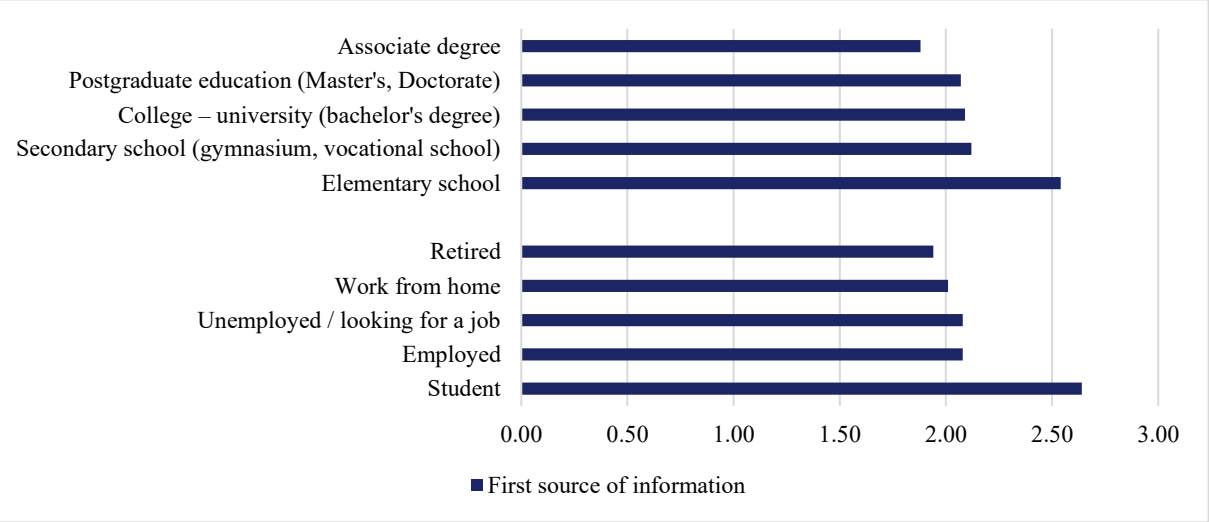


At first glance, the results show that on average, those in the 18–25 and 26–35 age groups own the most digital devices (the mean average being 2.42 and 2.27 respectively), and also

have the most internet access at all times (Appendix 5, Table 18 and Figure 2), as opposed to older generations, who have the least in both cases out of the 6 age groups.

When it comes to accessing and looking up information, Figure 3 (see also Table 19 in Appendix 5) shows rather drastic differences. Asking AI for information was found to be much more widespread among students as opposed to those who are employed, working from home, or looking for a job, while those who are retired prefer more traditional methods, but they are also quite digital in this sense as they too turn to Google first when seeking information. Additionally, it also needs to be mentioned that in Figure 3, the majority (67%) of those who only hold an elementary school diploma are students currently enrolled in high school, which explains why their first source of information is also AI, followed by Google.

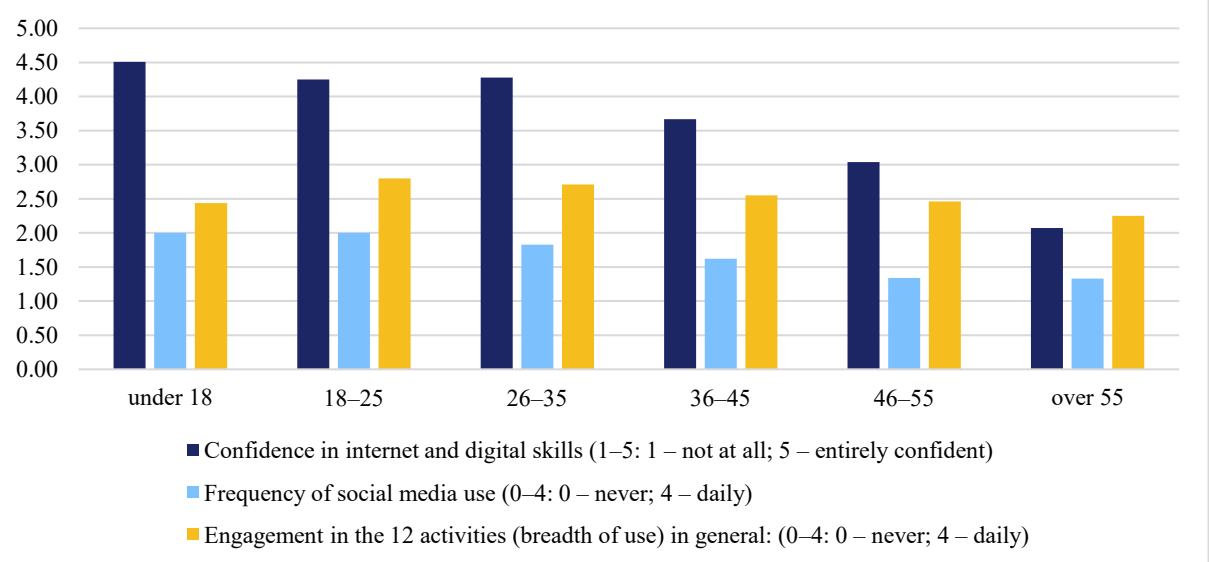
Figure 3. First source of information by educational level and employment status.



Moving on to one of the most important aspects of Digital Nativeness, Figure 4 (Appendix 5, Table 20) shows the averages of participants' confidence in their internet and digital skills (ranging from 1–5, with 1 indicating lack of confidence and a necessity for assistance, and 5 indicating the independence and highest confidence in one's digital skills), overall frequency of social media use, as well as their breadth of use. In Figure 4, we can see a tendency for confidence in internet and digital skills to decrease as age increases, which aligns with the participants' social media use as well as their breadth of use in general. This is especially clear in the case of younger age groups, particularly those under 18 and those between 18 and 35. The variety of online activities (breadth of use) participants do also tends to decrease with age, which suggests that while older individuals may still use the internet for a variety of reasons and tasks, they tend to feel less secure in their digital skills and abilities compared to younger

individuals. Although not too prominent, another notable difference can be seen in the averages of breadth of use and frequency of social media use, particularly focusing on the first three age groups in the table. As Helsper (2021) and Bennett and Maton (2010) pointed out, digital inequalities can and do exist anywhere, which is especially important to be mentioned, as it could not only impact one's digital skills and engagement with social media but also their access to digital media and devices in the first place. If we look at Figure 2 and 4, it can be clearly seen that there are differences among these three age groups in the number of devices they own, along with the number of places they have access to the internet, which all influence how they interact with media and what activities they choose to engage in online. However, despite these results, those under 18 still feel the most confident in their digital skills, which can be explained mainly by them being exposed to technology from a very young age, which is a much different learning curve from the one older generations had gone through, as they were introduced to digital technologies later in their lives.

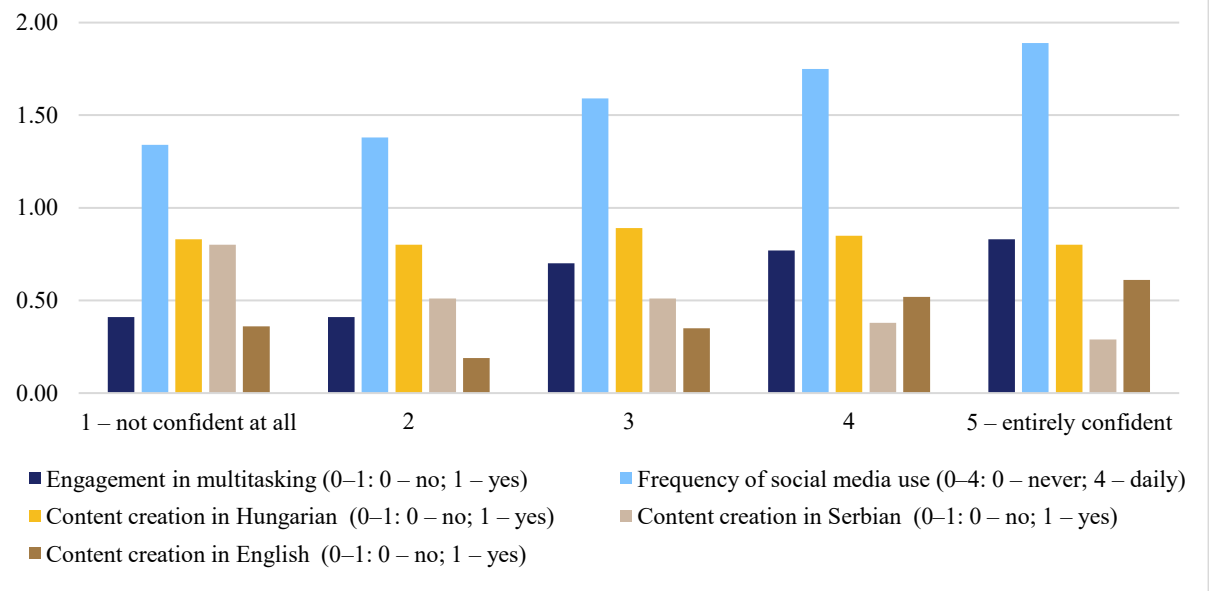
Figure 4. Averages of confidence in internet and digital skills, frequency of social media use, and breadth of use across age groups.



Connecting to these results above, the data also showed a connection between the participants' confidence in their internet and digital skills and their engagement in multitasking, how frequently they used social media sites, as well as their content creation in Hungarian, Serbian, and English. Based on the averages compiled in Figure 5 (Appendix 5, Table 21), the higher their confidence in their digital skills, the more likely they are to engage in multitasking and visit more social media sites. However, when it comes to creating content (sharing posts, photos, and communicating online) in the three languages, a drastic and steady decrease can be

seen in the averages of content creation in Serbian as confidence rises. As opposed to Serbian, in the case of content creation in English, as confidence rises, so does the likelihood of sharing English content online. Figure 4 also shows that those who are most confident in their digital skills are the youngest (under 18) closely followed by those between 18 and 35, which indicates that those under 18 are the ones who create the most content in English. On the other hand, those over the age of 55 are the least likely to create content in English, however, the table also shows that they are the most likely to create content in Serbian with drastically different averages when compared to the younger age groups.

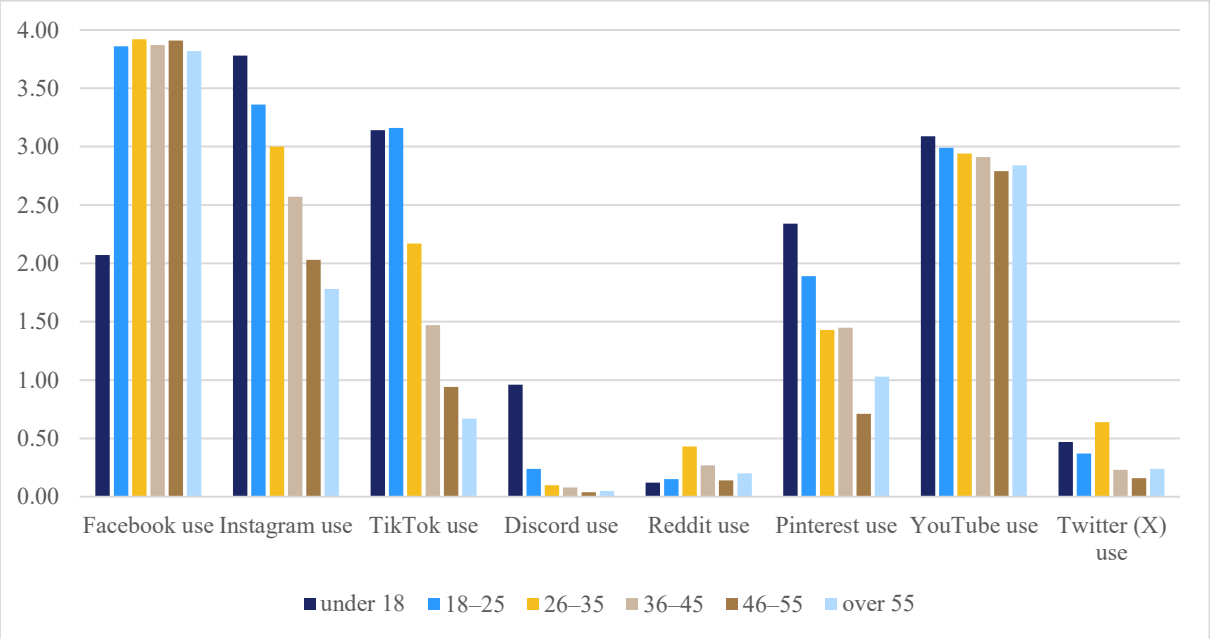
Figure 5. Averages of multitasking, social media use, and content creation across confidence levels in internet and digital skills.



To also clarify which social media platforms are visited by the participants and how often, Figure 6 (Appendix 5, Table 22) shows the averages of social media consumption based on age. The averages range from 0 to 4 indicating how often these sites are visited by the participants (0 – never, 1 – rarely, 2 – sometimes, 3 – regularly, 4 – daily). As in Figure 5 (Appendix 5, Table 21), the results in Figure 7 (Appendix 5, Table 23) also show that as age increases, social media use decreases, but so does the variety of visited social media sites. While those under 18 and between the ages of 18 and 35 regularly visit 4–5 social media sites, those over the age of 36 tend to use and visit 2–3 sites more regularly, with Facebook being among the most popular ones. One notable finding that needs to be highlighted is the case of Facebook, where the averages reveal that it is much less used among those under 18 as opposed to the rest of the participants. This might be due to Facebook becoming a much less desirable social media

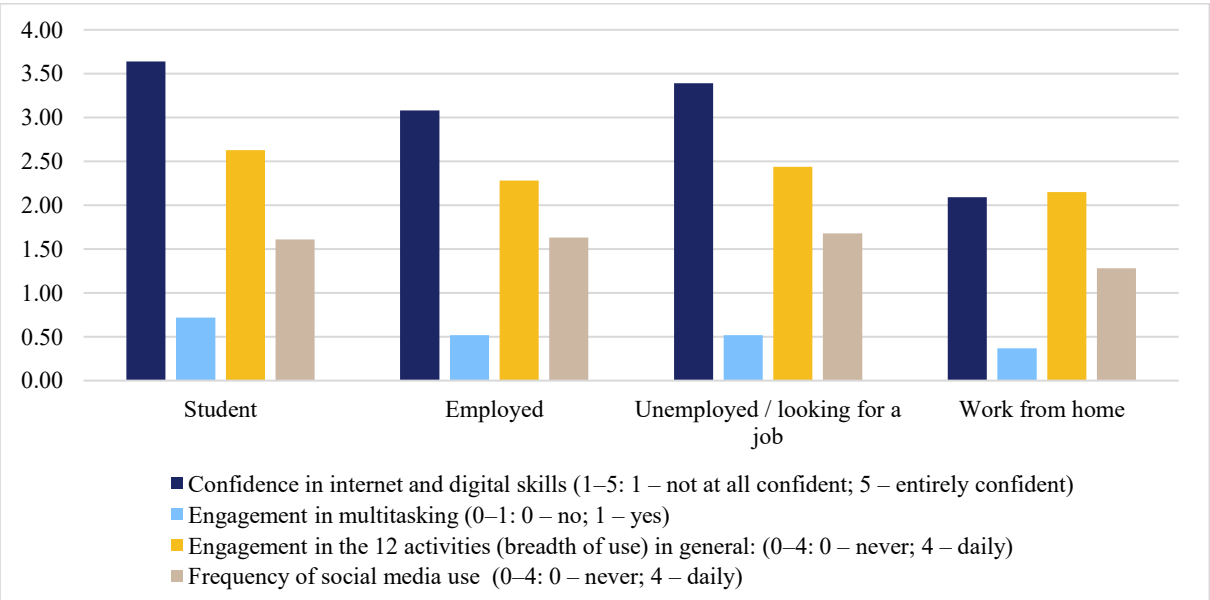
platform for this age group, especially when compared to Instagram and TikTok. Lastly, Discord and Twitter/X are the two least visited platforms by all age groups when contrasted with Facebook, Instagram, TikTok, YouTube, and Pinterest.

Figure 6. Average social media use frequency by age.



Finally, Figure 7 (Appendix 5, Table 23) shows digital skills and activities based on employment status, specifically the participants' overall digital activities regarding the 12 categories within breadth of use, multitasking, and also contains information on their social media consumption.

Figure 7. Activities, multitasking, and digital skills based on employment status.

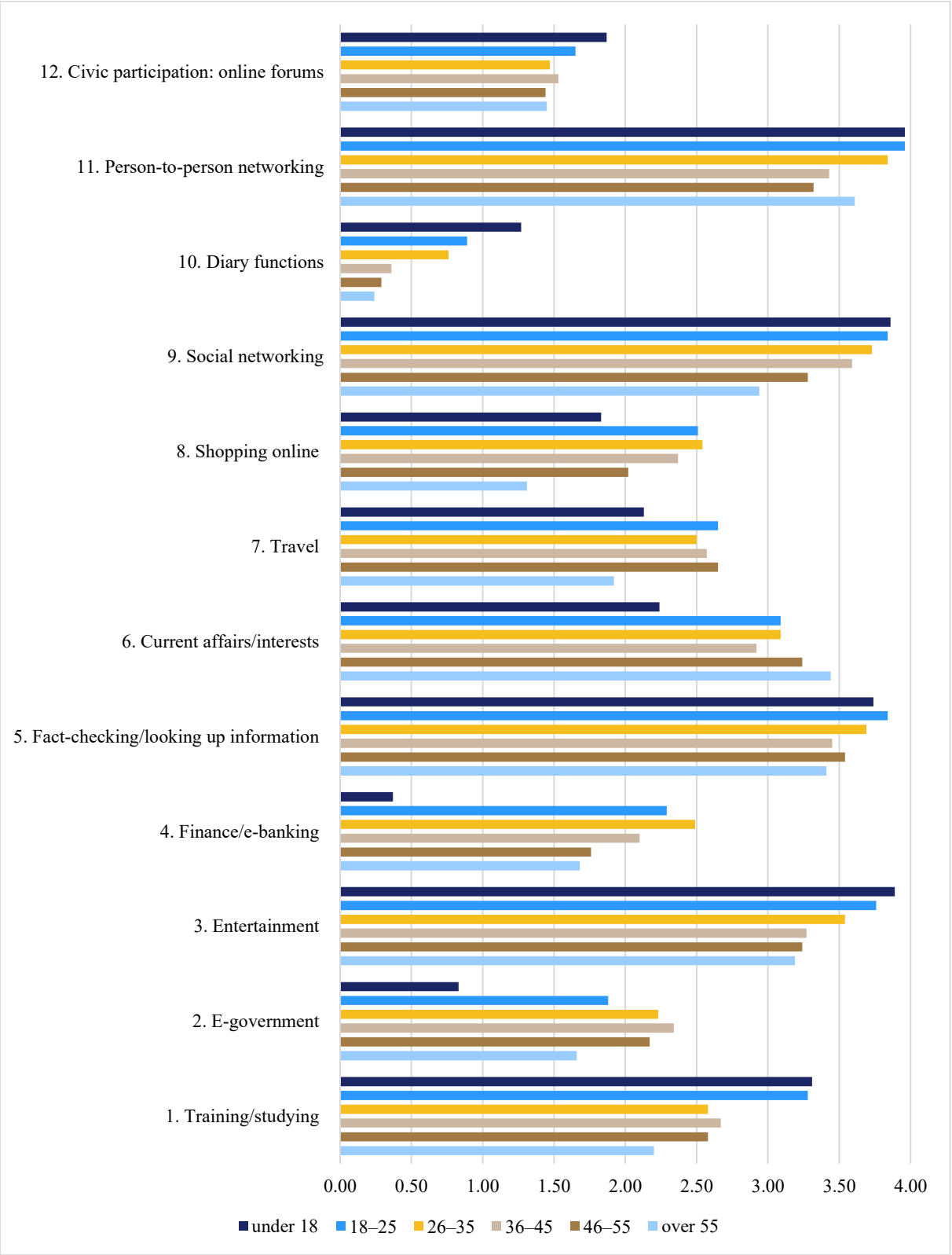


As has been established previously, the data here too revealed that in general, students tend to be the most confident in their internet and digital skills, and they are also most likely to multitask and use social media the most actively. Similarly to Helsper and Eynon's (2010) findings, the results of the current study also show a difference regarding breadth of use among students and those who are employed, as students are less likely to engage in e-banking, e-government, online shopping, and travel related activities, as those are often not yet common activities among young students who do not have a stable income. These varying levels of independence and responsibility are also reflected in Figures 7 and 8 (Appendix 5, Tables 23 and 24), which show in detail who engages in these activities the most and the least.

Figure 8 (Appendix 5, Table 24) summarizes the Vojvodina Hungarian participants' range of online activities in general based on their age in order to compare the groups and see if there are any notable differences in activities. The averages in Figure 8 range from 0 to 4, with 0 indicating that they do not engage in that particular activity at all, 1 indicating that they rarely do it, 2 indicating that they sometimes do, 3 indicating that they regularly do, and 4 indicating that they do the activity daily. What we can observe in Table 20 (Appendix 5) is that overall, the internet is more incorporated into the daily routines of those between 18–25, 26–35, and 36–45, and it is also noteworthy that these numbers slowly decrease as age increases. The most frequent activities among all age groups are entertainment, social networking, person-to-person networking, and fact-checking, while the least popular ones are civic participation and writing a diary. As expected, both e-government and e-finance are noticeably higher among those in the 26–35 age group as opposed to the youngest Vojvodina Hungarians and those over 55, while studying is the most frequently occurring activity among students who are under 18 and between 18–25. Overall, internet use was reported to be the highest and most varying in terms of activities among those between 18 and 35, which reflects how different age groups are at different life stages and have differing needs as well as priorities.

Lastly, years of internet contact was highest among two age groups: the 36–45 age group with an average of 19.51 years of contact with the internet and the 46–55 age group with an average of 18.41 years, followed by those above the age of 55 with an average of 17.45 years. The two age groups that had the least contact with the internet expressed in years was the 26–35 age group with an average of 17.15 years, while those between 18–25 years of age had an average of 12.91 years. Lastly, those under the age of 18 had the smallest average of 7.38 years.

Figure 8. Breadth of use in general based on age.



Although these numbers do seem to indicate that prolonged contact with the internet would result in higher and more complex internet activities, as well as higher familiarity with internet tools, social media, and digital tasks, based on all of the results in Figures 2–8 (also in

Appendix 5, Tables 18–24), it can be established that these averages do not necessarily reflect the reality of how acquainted the participants are with the internet, the use of digital devices, and even virtual tools. Despite being users of the internet for nearly 20 years, the results of the above analyses regarding breadth of use, social media habits, and confidence in their internet and digital skills indicate that those above the age of 35 are much less acquainted with and involved in digital activities than those below the age of 35, which can especially be observed in detail in Figures 2 and 4.

All in all, the above results show similar outcomes to earlier studies on Digital Nativeness (Helsper and Eynon 2010; Helsper 2021). The results of the present dissertation also highlight the importance of looking at multiple factors, but age especially in combination with experience and breadth of use when determining the extent to which an individual can be considered a Digital Native. At the same time, it is also crucial to not exclude any generation from the possibility of exhibiting higher degrees of Digital Nativeness, as studies, including the present one, have shown that Digital Nativeness can depend on a variety of factors at interplay (Tapscott 1998; Toledo 2007; Ransdell et al. 2011; Helsper 2021; Kincl and Štrach 2021), which explains why it is so important to provide as much context as possible when doing research in this area. Based on the results and the analysis of the tables above, it is not possible to entirely separate and make a clear-cut division between Digital Natives and Digital Immigrants as many age groups share similar digital habits, especially in the case of the 12 activities (breadth of use), as well as have been in contact with the internet for a prolonged period of time. However, it does need to be addressed that in general, the extent of participation, social media use and preferences, as well as content creation slowly but steadily decrease as age increases, which does indicate that there are some noteworthy differences, especially when comparing the youngest age group to the oldest. These results underscore the idea that we should not be making sense of Digital Nativeness as a binary, but as a continuum, where individual interests and the interplay of various other socio-economic, political, and personal factors intersect, which could lead to very different outcomes even within the same age group, for example.

5.1.1. Translanguaging and language choices among Vojvodina Hungarians: Do higher degrees of Digital Nativeness impact language choices and attitudes towards translanguaging?

To address Research Question 2, a number of questions in the questionnaire focused on gathering data on what languages participants come into contact with in their day-to-day lives

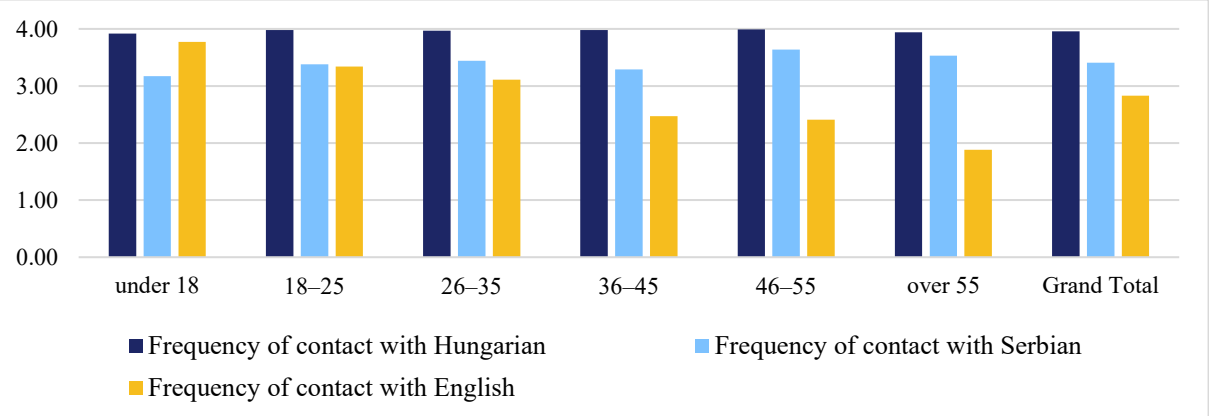
and how often, what their language choices are in a number of online and offline contexts, and whether or not they tend to engage in translanguaging (the answers participants gave were based on two examples of translanguaging included in the question, which is included in Appendix 3). Considering that the most prominent differences could be observed in the results of the data based on age in section 5.1 above, this section will also discuss the results of these questions for the sake of comparability to the results above in 5.1.

A Pearson correlation analysis was conducted using the Digital Nativeness Scale as the main independent variable to uncover whether higher degrees of Digital Nativeness impact language choices and attitudes towards translanguaging. The results of the Pearson correlation analysis revealed that higher degrees of Digital Nativeness do have an impact on Vojvodina Hungarians' language choices and attitudes towards translanguaging. The results to questions which asked participants about their language contact and language choices in a variety of different settings, their own self-perceived confidence in their spoken languages, and their standpoints regarding translanguaging all pointed out that there is a strong connection between Digital Nativeness, multilingualism, the preference for English in content consumption and creation, and the openness towards translanguaging. Based on the results, higher Digital Nativeness Scores indicated that participants have increased contact with English content (r = 0.456**, $p < 0.001$), tend to look things up on Google in English ($r = 0.352$**, $p < 0.001$), and also prefer using English more than the other two languages when creating content ($r = 0.351$**, $p < 0.001$) as opposed to Hungarian and Serbian. In the case of the Hungarian, higher Digital Nativeness Scores showed a moderate negative correlation in terms of Hungarian language contact on social media ($r = –0.300$**, $p < 0.001$). Furthermore, the results showed that Digital Nativeness can also be linked to higher degrees of self-perceived bravery and confidence in speaking English in person ($r = 0.448$**, $p < 0.001$) and using it online ($r = 0.382$**, $p < 0.001$). Lastly, a positive correlation was found between higher degrees of Digital Nativeness and openness to translanguaging: these participants tend to mix their spoken languages regularly (r = 0.225**, $p < 0.001$), and also find that the second translanguaging example (Text B containing Hungarian, Serbian, and English) resembles their own linguistic practices (r = 0.242**, $p <$ 0.001) more than Text A. These findings are further supported by the results to the two questions inquiring participants about whether they are bothered by someone else's translanguaging when they know and speak the used language(s) in question ($r = –0.095$*, $p <$ 0.05), and when they do not speak the language(s) being mixed in ($r = –0.240$**, $p < 0.001$), which both showed negative correlation. Overall, these negative correlations indicate that those

Vojvodina Hungarians who exhibited higher degrees of Digital Nativeness are significantly less bothered by language mixing and show a higher degree of tolerance towards linguistic fluidity which characterizes translingual practices. Below, the current section explores these areas in further detail.

Figure 9 (Appendix 5, Table 25) shows how intensively participants are in contact with the three languages of Hungarian, Serbian, and English, with 0 indicating that they never come into contact with the given language, and 4 indicating that they encounter the given language daily. Across all age groups, Hungarian is the language that is most regularly present in the lives of the participants with an average of 3.9, followed by Serbian with averages that range from 3.17 to 3.64. However, Serbian seems to be slightly more present in the lives of those over the age 46 as opposed to those under 18. As opposed to Serbian, the results show entirely different trends when it comes to the Vojvodina Hungarians' contact with the English language, as in this case, as age increases, the frequency of contact with English steadily decreases. The presence of English is especially prominent in the lives of those under 18, as it is nearly as frequently encountered by the participants as Hungarian is.

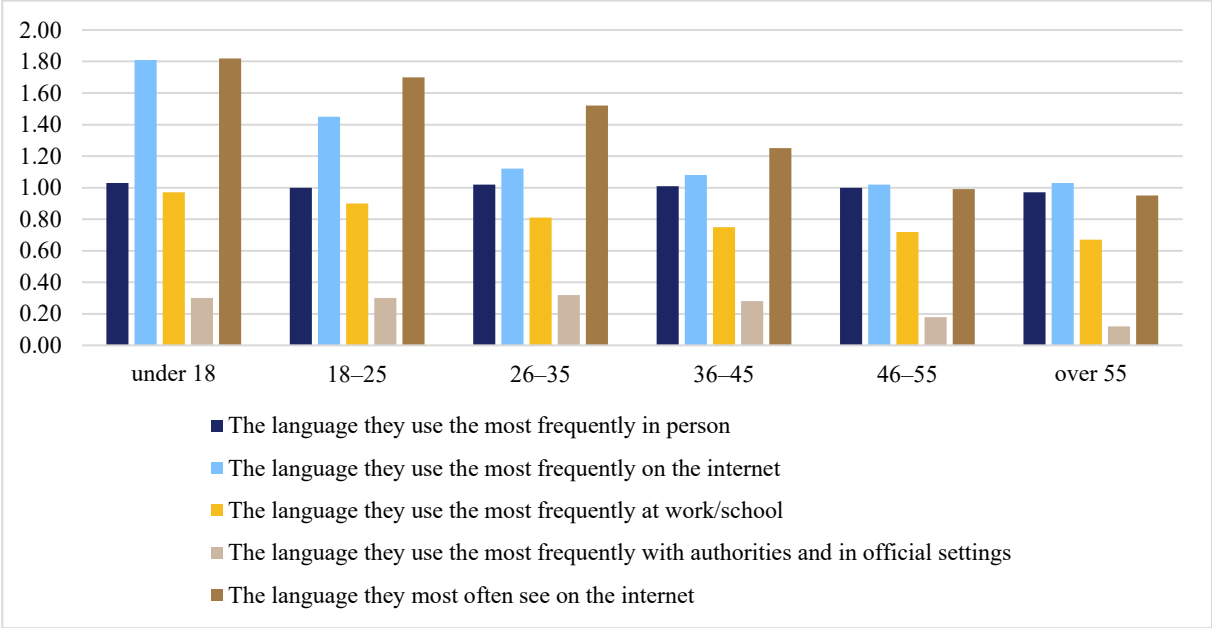
Figure 9. Frequencies of language contact with Hungarian, Serbian, and English.



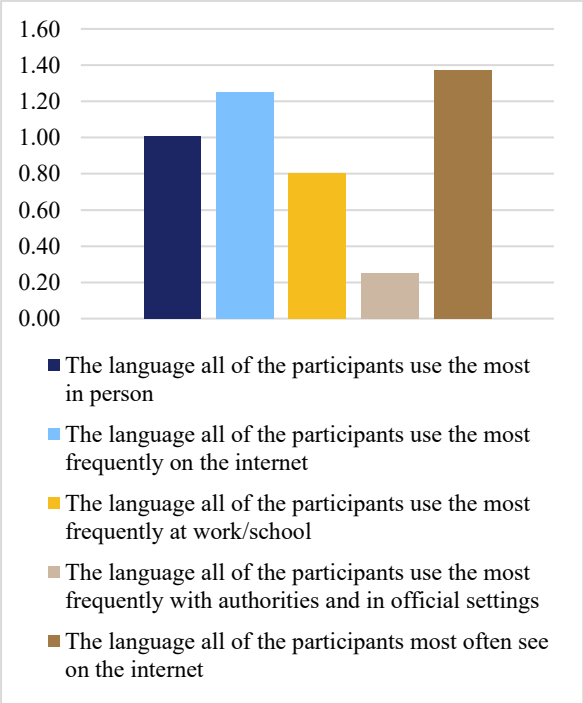
Another set of questions focused on the Vojvodina Hungarians' language choices in a variety of virtual and face-to-face contexts, the results of which are presented in Figure 10 (see also Appendix 5, Table 26). The averages shown in the table are a range between 0 (Serbian) and 2 (English), with 1 representing Hungarian. When looking at the Grand Total row, Hungarian seems to be the primary language of choice by the participants in almost all cases, with the exception of situations where they have to encounter authorities or communicate in formal settings. Another setting where Serbian is also quite often present alongside Hungarian is that of the workplace, as can be seen in the averages of those around and over the age of 36.

English, however, is only prominent in one situation, which is the internet, and this is only true in the case of two age groups: those under 18 and to some extent, those between 18 and 25.

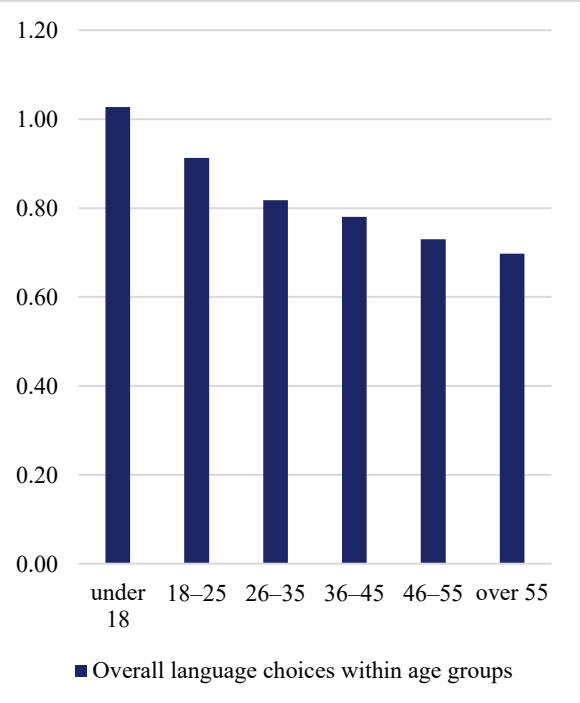
Figure 10. The Vojvodina Hungarians' language choices in different online and face-to-face contexts.



Grand Total B from Table 26 (Appendix 5)



Grand Total A from Table 26 (Appendix 5)



While the averages for face-to-face situations are quite uniform and show that Hungarian is the most frequently chosen language, the very minimal difference in these numbers may

indicate that those under 18 sometimes choose English, while those over 55 choose Serbian as their language of communication occasionally. Taking Figures 9 and 10 into consideration, the age-related differences that can be observed in them seem to show a unidirectional deviation, which can be understood as patterns of ongoing changes according to Labovian sociolinguistics (Labov 1994). From this perspective, these trends can be interpreted in real time, which means that the integration of English into the digital linguistic practices of the younger Vojvodina Hungarians does not seem to be simply a phase that will pass, but rather a sign of permanent change.

Lastly, Figure 11 and 12 (see also Appendix 5, Table 27 and 28 for the exact results) show the averages to Questions 24–27 relating to the Vojvodina Hungarians' translanguaging practices and their attitudes towards the mixing of languages in general. The question which focused on asking participants whether they engaged in translanguaging was accompanied by a linguistic example (see Appendix 3) along with a short explanation on the phenomenon to ensure that they understand what the question is asking them. The results of the three questions are expressed in Figure 11 (Appendix 5, Table 27) in averages that range from 0, indicating disagreement, to 1 which indicates agreement with the given questions.

Figure 11. Attitudes towards translanguaging among Vojvodina Hungarians based on the responses to Questions 24–25.

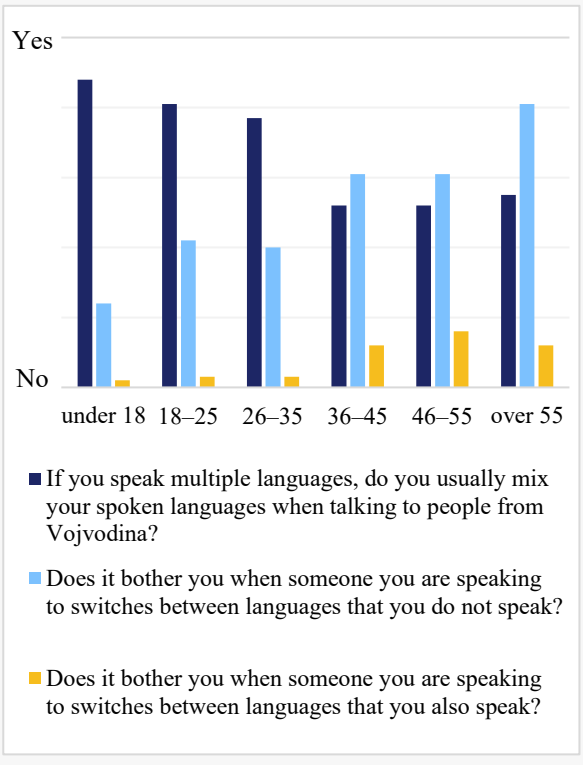
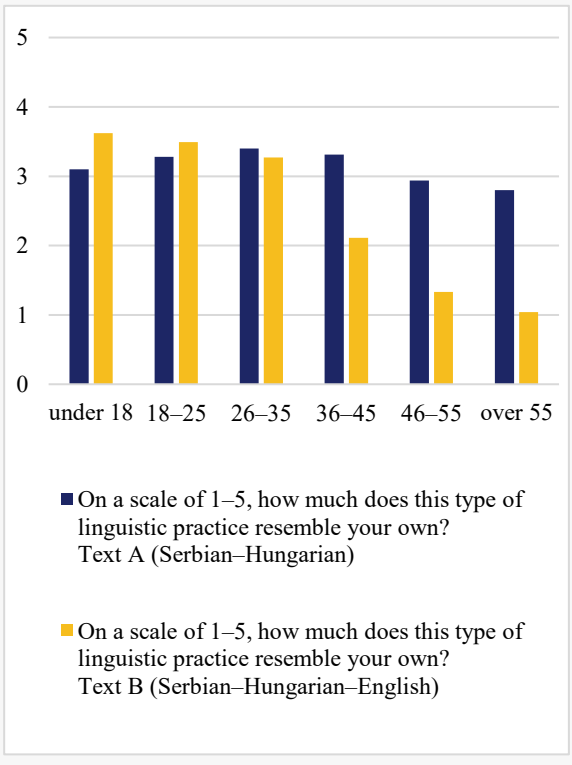


Figure 12. Attitudes towards translanguaging among Vojvodina Hungarians based on the responses to Questions 26–27.



Additionally, two more questions followed suit with specific linguistic examples (Appendix 5, Figure 12 and Table 28), asking the participants to share how much their own conversations resembled the ones embedded in the questions on a scale of 1–5, with 5 indicating a strong resemblance. The two linguistic examples which were included within these two additional questions on translanguaging were provided by two Vojvodina Hungarians independently of the questionnaire and the participants in the present study: a 36-year-old male participant who was working in business and administration also in Novi Sad/Újvidék (Text A, Appendix 3, Question 26), and the other example was given by a 21-year-old female attending university in Novi Sad/Újvidék (Text B, Appendix 3, Question 27). Both examples were taken from their private Messenger conversations with colleagues and friends, who have all given their consent and were ensured the messages and their identities will remain anonymized. In the original questionnaire, these texts appeared in the same uniform font without any of the formatting and the markers used in the present chapter and in Appendix 3. These markers were added to the dissertation solely to make the reading process of the dissertation clearer and to help the reader identify the linguistic resources and translanguaging instances more easily, should they not be familiar with the languages in question. The reason why these two examples were included in the questionnaire was not only because they were authentic pieces of conversations that took place among Vojvodina Hungarians online, but also because they included quite different translanguaging examples. While the first example only included Hungarian and Serbian and was a conversation among close colleagues who were around the age of 36 (Text A), the other example (Text B) which was provided by the 21-year-old was a conversation among university friends and included Hungarian, English, and a little Serbian.

The results to these two questions revealed that in general, the first three age groups (under 18 to 35) found Text B slightly more similar to their own linguistic practices than Text A which only included Hungarian and Serbian. The situation is entirely opposite for the older age groups, where Text B was shown to not resemble their linguistic practices at all, while Text A did to some extent. These results can further be explained when we take into consideration the other three questions on general translanguaging tendencies and their attitudes towards language mixing, as the data shows that the participants' tolerance towards language mixing tends to gradually decrease as age increases, while translanguaging appears to be a more common practice among younger Vojvodina Hungarians, who are also less bothered by language mixing even if they do not understand the language that is being used.

5.2. Qualitative perspective: The Vojvodina Hungarians' digital habits and digital linguistic practices based on life stories in relation to technology

5.2.1. Life stories and digital habits over time

The life stories the participants shared with me during the interviews indicate that the majority are online very often (up to 5–6 hours daily), and tend to communicate and look up information on the internet much more frequently nowadays as opposed to 10–15 years ago, when their main source of information was the television, radio, newspaper, or seeking information directly from other people. While the majority of the participants consumed social media daily, Luca, Liza, and Endre visited these platforms and other informative websites less frequently. The most visited websites and social media platforms are Facebook, TikTok, and Instagram, while the most popular apps the Vojvodina Hungarians communicate through are Facebook Messenger, Viber, and Instagram messages. One particularly notable finding that was in line with the findings of the preliminary study was that participants generally tended to consume and repurpose already existing content (mainly in their first language, but also content they came across in English, and Serbian content to some extent as well) much more often than create new. However, those who were still students and under the age of 26 at the time of the interviews (Dávid, Dorina, Dorottya, Dániel) mentioned that they did create new content and shared it on the internet on a rather regular (weekly) basis, especially in the case of Dorina and Dorottya who regularly posted on Instagram, which is likely due to the platform's features as these tend to encourage users to share and engage more with content compared to other platforms.

The third section in the interview that focused on additional information on the participants' digital habits and device usage uncovered that each participant had at least one digital device, which was most often a mobile phone or a personal computer (see Table 3 below). Emina, Dorina, Dávid, Gábor, Dorottya, Emese, and Erika mentioned they had a smart phone, a smart TV, 4G or 5G internet on their phones as well as ADSL internet, and a laptop, while Dániel also owned a personal computer. Dorina, Dávid, Emina, Gábor, and Dániel also mentioned they had a smart watch and Bluetooth speakers on top of all the other devices listed above. Leon, Liza, Jana, Levente, and Luca mentioned they had a smart phone, and a laptop or personal computer, ADSL internet, and Jana, Leon, and Luca had smart TVs too. Lastly, Éva and Endre had the least number of digital devices, a smart phone and a personal computer or a laptop, along with ADSL internet connection. To conclude, each participant has internet

connection (ADSL or 4G/5G additionally), a smart phone, and a personal computer or laptop. In total, Dániel, Emina, and Gábor have 6 devices, Dorina has 5, Dávid has 4, Jana, Dorottya, Emese, Erika, Leon, and Luca have 3, and Liza, Endre, Éva, and Levente have 2.

Table 3. The Vojvodina Hungarian participants' owned digital devices.

	Smartphone	Laptop/PC	Smart TV	Smart watch	Bluetooth speakers	4G or 5G/ADSL internet	Total number of devices
Dániel	✓	✓✓	✓	✓	✓	✓✓	6
Emina	✓	✓	✓	✓	✓	✓✓	6
Gábor	✓	✓	✓	✓	✓	✓✓	6
Dorina	✓	✓	✓	✓	✓	✓✓	5
Dávid	✓	✓	✓	✓		✓✓	4
Jana	✓	✓	✓			✓	3
Dorottya	✓	✓	✓			✓	3
Emese	✓	✓	✓			✓	3
Erika	✓	✓	✓			✓✓	3
Leon	✓	✓				✓✓	3
Luca	✓	✓				✓✓	3
Liza	✓	✓				✓	2
Endre	✓	✓				✓	2
Éva	✓	✓				✓	2
Levente	✓	✓				✓	2

Leon, Liza, and Éva explained that due to their type of work, they often had to rely on digital devices especially in the past 10–15 years as more and more documents and companies had undergone a gradual process of digitization. This transition was rather difficult for them considering that they were never too acquainted with digital devices and working digitally, let alone remotely. Levente, Erika, and Luca shared similar stories regarding their experience with technology and digital devices. Although they now use a mobile phone or a laptop/PC regularly for personal use, most often to read the news or communicate, they too mentioned that 15–20 years ago they only heard about these devices on the television and they seemed unreachable at that point in time, especially regarding those smart devices that are easily accessible by almost anyone nowadays.

The first extract from Levente highlights how difference is constructed based on the space and location where interactions take place. By contrasting his own experience and history of running errands manually with his grandchildren's current digital reality in various areas of their lives (including education), he illustrates how an axis of differentiation (Gal and Irvine

2019) is created to distinguish between the past and present. This example also illustrates how specific locations and tools are iconized to represent different generations:

(1) *"Régen nekünk nem volt egy telefon se néha, hogy lekérdezzük mi a pontos idő vagy hogy megkérdezzük mikor érkezik a busz Kanizsáról Szabadkára, nem hogy az interentről rendeljük meg a zsák krumplit a Trgoprometból [ma: Univerexport] vagy hogy az interenten körösztül nyittassunk számlát egy banknál. A 10 és 12 éves kisunokáim már még a házi feladatukat is ott csinálják és küldik be a tanítónőknek. Ha kellett valamit intézni vagy megkérdezni akkor felültél a biciklire és bementél a* ***centárba**** *[központba] vagy ahova kellett menni és megkérdezted személyesen, papírra felírtad hogy ne felejtsd el."*

"Back in the day, we didn't even have a telephone sometimes to dial a number and ask for the precise time or to ask when the bus was to arrive from Kanjiža/Magyarkanizsa to Subotica/Szabadka, let alone to order a bag of potatoes from Trgopromet's [now: Univerexport] website on the internet or to open a bank account over the internet. My grandchildren, aged 10 and 12, even do their homework there and send it to their teachers online now. If you had to take care of something or seek information back in the day, you got on your bike and went to the **centre** [said in Serbian in the original quote] or wherever you needed to go and asked for it in person, and then you put it down on paper so you wouldn't forget." (Levente)

As he explains, his grandchildren are already using digital devices at the young ages of 10 and 12 to submit homework and are very good at it, while he still very often finds it difficult to navigate his phone. Following the logic of Gal and Irvine (2019), Levente contrasts two very different realities: the analog past and the digital present. His example shows a case of fractal recursivity (Gal and Irvine 2019) in the way that he is projecting the global shift towards technology that the other participants also talked about, onto the scale of his own interactions and life. By contrasting the physical *centar* "city center" and the new reality of digital presence, Levente is establishing a distinction between his generation's physical and his grandchildren's digital presence.

While Levente creates a sharp contrast between the physical and the digital and even places the two at opposition, almost excluding the possibility of the two realities coexisting, Éva's example also shows a contrast between these different realities, however, she describes it is a much more gradual process. As Éva explained, when her firm initially installed computers

20 years ago, everything was written in English which only made it more challenging to learn an already difficult skill. Although it was a lengthy journey, she slowly transitioned from paper to phone when looking up the daily news or paying the bills, and she still has her own traditions she keeps, such as listening to the daily news on the Novi Sad/Újvidék radio as she has done it for 10 years. Éva talked about her personal journey and growth with digital devices in the following way:

(2) *"Nekem nagyon nehezen ment eleinte ezeket a gépeket kezelni mostmár úgy egy húsz éve, amikor először a* ***firmánk**** *[cégünk] elkezdte digitalizálni az egész rendszerét. Akkoriban még csak fent az irodákba akik dolgoztak csak ők tudták azokat a gépeket használni de sokszor hallottuk, hogy ők is panaszkodtak, hogy mindent angolul ír a gép. De mostmár megszoktam, szinte már a tévét sem nyitom fel, a rádiót még meghallgatom, a* ***Novi Sad**-i**** *[újvidéki] híreket rajta mert azt több tíz éve minden nap meghallgattam, de már nagyon újságot sem szoktam vásárolni a trafikban, mert mindent megtalálok a telefonon."*

"I found it very difficult to use these machines at first, almost twenty years ago now, when our **company** [Serbian loanword] first started to digitize its whole system. At that time, the people working upstairs in the offices were the only ones who knew how to use those machines, but we often heard them complain that everything on them was written in English. But now I've got used to it, I rarely even turn on the TV anymore, but I do still listen to the radio, specifically the news from **Novi Sad**/Újvidék [said in Serbian in the original quote] out of habit as I have been listening to it every day for ten years, but I don't even buy newspapers in the newsagent's anymore seeing as I can find everything on the phone." (Éva)

In her current reality, the fact that her long standing habit of listening to the Novi Sad/Újvidék radio, which she ties to a much less digitized past, is still a regularly occurring activity suggests that she is more at ease with these novelties than Levente is and she navigates the intersection of these different realities with more confidence. In the context of her workplace, the English language, digital skills, and "working upstairs" became to represent access and expertise, iconizing the professional world, which at one point was understood to be unreachable. Based on Éva's account, the separation of "people working upstairs in the offices" from the rest of the workers creates what Gal and Irvine (2019) call, a standardizing axis, where the English language and digital competence are iconized as high-status standards on one side of the axis, while the periphery (i.e., those who lack expertise) is on the other. Similarly to Levente's *centar*

"city center," the office "upstairs" functions as a physical space where digital competence and English became closely tied to access and success (i.e., the standard).

Similarly to Éva, Luca and Liza also became much more acquainted with these devices over the years and are able to navigate digital spaces much more easily nowadays, and even run errands online in connection with finances, shopping, learning, and work. In Luca's case, technological proficiency and generation are assumed to be directly linked. As she explained, her father, a retired banker who was 76 years old at the time of the interview, too uses digital devices daily as a replacement for television and newspapers but also most often to contact his children and grandchildren. However, Luca explained that they frequently need to assist him because he often cannot find things that he is looking for on his phone or accidentally navigates away and opens apps due to the sensitivity of the touchscreen mobile phone that he is not too used to. In this context, an axis of differentiation (Gal and Irvine 2019) is created where old age and the grandfather's 'clumsiness' (i.e., the lack of digital expertise) lie on one side of the axis, while young age and the teaching role of grandchildren represent the standard or the socially expected level of digital competence on the other. Therefore, the difficulty of using digital devices is iconized as a trait of an analog/non-digital past, which creates a distance between generations and like in the case of Levente and Éva above, the global shift towards technology is being projected onto the scale of their own interactions, representing a case of fractal recursivity (Gal and Irvine 2019).

While the older participants often view and talk about technology as an obstacle within a primarily physical world (especially in the context of the workplace), the younger participants describe their realities differently, where the digital is seemingly inseparable from the physical. The present section includes examples and excerpts from the interviews that illustrate how younger generations position themselves on the opposite (i.e., the standard) side of the standardizing axis, where digital expertise is not understood to be just a skill, but a requirement for as well as an icon of being a functioning and efficient member of modern society. The way that they talk about their daily activities further reinforces this axis of differentiation, where they almost entirely erase the possibility of non-digital life, making the digital side of the axis appear as the only recognized reality. Most of the older participants mentioned above shared that as opposed to themselves, their children and especially grandchildren spend up to 7 hours a day on the internet as they can do everything online. This is also true for many of the participants in the present study too:

(3) *"Szinte mindent is ott csinálok, a sulis beadandóktól kezdve a kormányhivatalos dolgokig, a vásárlást főleg ha ilyen Shein vagy Temus oldalról van szó, és amúgy még a telefonos egyenleg feltöltést is neten szoktam befizetni, de rengetegszer a sorozatokat, zenehallgatást és az olvasást is az interneten szoktam csinálni."*

"I do almost everything online, from school assignments to government official documents and tasks, and also shopping especially if it's from Shein or Temu, and I even pay my phone bill online, but I also frequently watch my series, listen to music, and do my reading online." (Dorina)

From Dorina's perspective, the digital space is no longer perceived to be a novelty but has become the standard place for taking care of all of her social and professional tasks and errands almost exclusively. She describes her reality as one that is highly digital, where being reachable online is understood to be a sign of being a functioning member of society, which reiterates the same axis of differentiation as those above, only in this case, Dorina lies or positions herself on the standard side of it. Based on the variety of tasks she lists and the way she talks about them, it seems that she erases the possibility of running errands 'manually' in the physical world and can only imagine doing these in digital spaces. Dávid, Dorottya, Jana, Emina, Gábor, Dániel, Emese, and Endre all shared that they very often run digital errands for themselves too, similarly to Dorina's experience above in her quote. However, these participants also tend to help their parents run digital errands, who often need assistance to pay the bills online or to book appointments, holidays, and buy travel tickets too. In Endre's case for example, as a psychologist, knowing how to navigate the internet has always been of key importance for the purpose of advertising his office and services, which also necessitates the use of financial and other advertising related services. His perspective also supports the idea of those previously that digital spaces become the standard and primary, if not exclusive, sites for functioning successfully as a modern day citizen, where being digitally visible as well as competent is directly linked with being professional and legitimate (i.e., on the standard side of Gal and Irvine's 2019 axis of differentiation).

Moreover, the younger participants also tended to talk about digital platforms as indispensable tools that both promote their own efficiency and also act as shields against situations where potential "embarrassment" as Emina explained is mitigated as opposed to face-to-face interactions. In the group interview, Jana, Emina, and Gábor mentioned that due to the nature of their work, they are "online more often than they are offline," as Gábor phrased it. Emina emphasized that there are not many things she could not take care of online nowadays:

(4) *"Hát ugye mivel mi minden hétköznapot a gép előtt töltünk az irodában, már annyira rá vagyunk szokva, hogy lassan szinte már még a heti <u>shoppingot</u>* [English loanword] is az interneten keresztül végeznénk ha nálunk itt Szabadkán lehetne házhoz rendelni mint magyaroknál [Magyarországon] a boltokból, de lehet ez az egyetlen szerencsénk, hogy nincs ilyen opció még! De egyébként, teljesen őszintén, én egyáltalán nem bánom, hogy manapság már ennyire sok <u>to-do</u>* listás feladatomat el tudom intézni az interneten, mert annyi rengeteg időt megspórolok vele, amit így akkor a családommal és barátokkal tudok eltölteni otthon vagy itt a városban. De amúgy most képzeljétek el, ha még mindig úgy lenne mint régen, hogy hogyha be akartad fizetni a rézsit, akkor külön-külön kellett elmenni a Vodovodba meg a Cimgasba ahogy a tata csinálta; vagy ha éppen meg akartál kérdezni valamit a városházán, ami tuti hülye kérdés lett volna, és ezt most simán letudod egy emaillel. Nem is kell már még idegeskedned sem rajta, mert nem* ***blamálod****** *[járatod] le magad úgy mint élőben. Néha tehát tényleg életmentő tud lenni."*

"Since we spend every weekday in the office sitting in front of the computer, we're so used to it that we are this close to doing even our weekly shopping online too if we could get home delivery from stores here in Subotica/Szabadka, like people do in Hungary. But maybe that's our only luck, that we don't have that option… yet! But in full honesty, I personally don't mind that I can do so many of my chores from my to-do list on the internet, as it just saves so much time, which I can then in turn spend with my friends and family back home or here in the city. Like, imagine if we still had to go to Cimgas [HVAC contractor] and Vodovod [water utility company] separately if we wanted to pay those two bills like my grandpa used to, or go to the city hall just to ask a probably silly question, which we could just send an email now and not even worry about **embarrassing** [Serbian loanword] ourselves in real life. It truly can be a lifesaver at times!" (Emina)

In their group interview, Emina explained that even though things can be a bit monotonous at times, she still would not change anything about the way things work nowadays. As she explains in the quote above, she highly values that she is able to save time by taking care of her errands digitally, which in turn she can then spend with loved ones. By contrasting the ways her grandfather used to take care of errands manually and her own ways of simply writing emails, Emina describes and iconizes digital tools and platforms as 'lifesaving.' Furthermore, by mentioning how she is able to avoid embarrassment online, she is portraying the digital

world as a safe space that is seemingly free of uncomfortable situations. From this perspective, she does not view 'doing things manually' as a realistic or option in her own reality as opposed to her grandfather's time, positioning herself at the standard side of the axis of differentiation (Gal and Irvine 2019) similarly to Dorina and Endre.

Many of the younger participants like Gábor himself experienced the digital space entirely differently when compared to the experiences that Leon, Liza, Éva, Levente, Erika, and Luca shared. While the older participants described the shift to digital spaces as an obligatory and involuntary process, younger participants such as Gábor had experienced it much more positively, as he was able to immerse himself in digital spaces and freely explore them in the ways that he personally wished to. As opposed to the older participants, Gábor was not forced to develop digital competence in a professional context, but instead, he had the freedom of acquiring these skills through his own interests. In their group interview with Emina and Jana, Gábor told his own story with the internet and the languages he often came into contact with, in the following way:

(5) *"Engem az általános első óta nem tudtak apámék elszedni a kompjuter [számítógép] elől, minden nap a suli után ott ültem este 10-ig és hallgattam CD-ről a zenéket és közben ment a Neighbours from Hell* játék, azt imádtam nagyon! Most hogy visszagondolok rá, akkoriban még minden angolul volt a settingsben* [beállításokban], meg a játék és a zenék is mind angolul voltak. A Google-t például nem is tudtuk, hogy mire való, mert ha magyarul vagy szerbül írtunk be valamit a keresőbe, akkor mindig olyan furcsaságokat adott ki az oldal… sosem volt sok köze ahhoz, amit beírtunk. De attól még mi így a* ***drustvón***** *[baráti társaságon] belül magyarul meg sokszor szerbül beszélgettünk azon a réges régi MSN üzenetező programon, meg a MySpace-en, és mintha akkor egy időben még a Skype is nagyon ment volna. Aztán később a középben elkezdtünk mindannyian regisztrálni a Facebookra, az is olyan erős emlékem, hogy a mai napig eszembe jut még a Facebooknak az a régi dizájnja. Kábé onnantól kezdve mindenki ott lógott éjjel nappal, és még a suliban az oszink néha azzal jött, hogy nem akar minket látni este 11-kor online, hahahah! Szóval kábé minden lépésünket láttak a tanáraink, ha a Facebookon ismerősök voltunk! Néha eléggé ijetsző volt."*

"Ever since I was in first grade, my parents couldn't rip me away from the computer. Every day after school I'd sit there until 10 PM, listening to music on CDs, and playing my Neighbors from Hell game, which I really loved! Looking back now, everything was in English in the computer settings back then, and the games and all the music were

> in English too. For example, we didn't even know initially what Google was for, because if we typed something into the search bar in Hungarian or Serbian, the page would always come up with such odd things… it never had much to do with what we typed in. But even with all that, we would still chat in Hungarian and quite often in Serbian too within the **friend group** [said in Serbian in the original quote] on MSN Messenger, and on MySpace, and if I remember correctly, Skype was also really big for a while then. Then later, in high school, we all started to register accounts on Facebook, and that's also such a vivid memory of mine! I still remember Facebook's old design like it was yesterday! From then on, everyone was online and reachable day and night, and even at school, our homeroom teacher would sometimes warn us that they didn't want to see us online at 11 PM, hahahah! So, our teachers basically saw everything we did if we were friends with them on Facebook – it was quite scary sometimes!" (Gábor)

Gábor's experience revealed what the early stages of the internet in the region looked like roughly between the years 2000 and 2012. As he described, this digital world was both a mystery and an enchanting novelty, where he could spend an infinite amount of time multitasking, which is now an integral part of his day-to-day life. What once used to be gaming and listening to music simultaneously, has now turned into playing a podcast in the background while making a cup of coffee and talking to his friend on the phone. However, there were occasions where he faced challenges, as searching for things in his first language often yielded useless and confusing results due to dominance of the English language in media and software back then. Seeing as Gábor was immersed in English-only digital spaces from early childhood, this might have influenced his ideological perception of technology, where he now views English as an integral and 'natural' part of digital spaces. By doing so, he is also positioning himself on the standard side of the axis of differentiation (Gal and Irvine 2019) and is also iconizing digital expertise and English knowledge as the expected norm. In this sense, it is of no surprise that this linguistic barrier was rather significant for internet users like Levente, Éva, Luca, and Liza in the present study too, who at that time did not speak nor know much English, let alone know how to use computers and digital devices overall, which was an additional challenging factor. As opposed to Levente, Éva, Luca, and Liza, most of the younger interviewees talked about growing up with technology and already having a computer at home growing up. What also explains the older interviewees' frustration with the transitions they had to go through at work, is that it was not only the language but also the new platform they had to get accustomed to, learn, and actively use for work-related tasks, unlike the younger

individuals who could spend their time voluntarily playing games and exploring this novelty, instead of being pressured into doing serious tasks from the very beginning. Gábor's account also shows how social life and identity changed and evolved over time. Transitioning from the early MSN Messenger and Skype platforms to more open and public platforms like Facebook, Instagram, and nowadays TikTok as well, shows just how much of a major shift took place in the way people socialized and interacted with one another and performed their online identities. The fact that teachers were able to easily see their students' digital activities on Facebook was a new and often unsettling experience, foreshadowing the lack of privacy that would eventually become a major characteristic of social media.

On average, the majority of the participants have been internet users for 10–15 years, some even 20 (Leon and Liza). What we can see from their shared experiences is that everyone uses the internet and digital devices slightly differently but for mostly similar purposes that include communicating and reading the news. However, there were many other participants who mentioned that they do a variety of other things online, such as running errands digitally, which include online shopping, governmental and financial tasks, entertainment, studying, and fact-checking. Most of these activities were found in Helsper and Eynon's (2010) study to be done by individuals aged 30 up to 50 in the UK, however, among the 15 interviewees, these activities are already common among people as young as 19 and up to roughly 40–45. Considering their level of exposure, occupation, and the types of activities they regularly do online, Gábor, Jana, Emina, Dávid, Dorina, Dorottya, Dániel, Emese, Erika, Éva, and Endre all demonstrated a high degree of Digital Nativeness (as defined by Helsper and Eynon 2010).

5.2.2. Digital linguistic practices and general attitudes towards languages

Two sections in the interview (see Appendix 2, sections *B. Linguistic habits, attitudes, and spoken languages,* and *D. Online communities in Vojvodina*) focused on gaining detailed responses, anecdotes, and examples to answer Research Question 3 that focuses on the linguistic habits of the Vojvodina Hungarians in digital spaces. As mentioned in 5.2.1, a few participants speak Serbian as a second language, while most of the other participants speak Serbian and English well and have learned these languages either at home from their families and friends, or in school. They mentioned additionally that they often switched between Serbian and Hungarian in their day-to-day conversations depending on the type of the situation, the intended message they wished to convey, and often, the power relations among interlocutors.

Younger individuals also often revealed that they regularly used English when translanguaging with their friends and even colleagues from work alongside Hungarian and Serbian. They also noted that their communicative practices tended to extend to online communicative settings too, especially regarding their private messages taking place on Facebook Messenger, Instagram, Viber, and sometimes WhatsApp.

All of the participants who gave interviews shared that they regularly used Hungarian on the internet, and very often, they tended to combine Hungarian with Serbian or English. On the other hand, the younger interviewees (Dániel, Dorina, Dorottya, Dávid, Emina, Gábor, and Jana) also shared that they regularly tended to combine all three languages at the same time when communicating, which was not too characteristic of the linguistic examples the rest of the participants (especially the older generations) shared with me. When asked about their knowledge, their perceived skills, and attitudes towards the three languages, the participants generally tended to say positive things regarding the languages, however, a few individuals mentioned that they were not too comfortable speaking Serbian (Dorina, Dorottya, Dávid) for longer periods of time nor reading Serbian Cyrillic, or English (Leon, Liza, Endre, Erika, Éva, Emese, and Dániel) also due to their self-perceived low proficiency in the language or their lack of knowledge of the language overall. However, when it comes to written text, these insecurities do not seem to discourage the participants from using Serbian and/or English along with Hungarian, which will be discussed in the coming sections in detail. Several participants expressed that they were proud of being a Vojvodina Hungarian and many were also fond of the Vojvodina Hungarian variety due to the "colorfulness of the language" (*"a nyelvnek a szinessége,"* Éva) and also for the "uniqueness of its vocabulary" (*"a szókincs egyedisége,"* Levente), which many agree is more creative and likeable than most Hungary Hungarian varieties, especially the standard variety (Leon, Jana, Luca, Dorina, Gábor, Dániel, and Éva). Almost all participants mentioned that they frequently used Serbian words and expressions in their Hungarian speech, which they rationalize as most frequently taking place due to the lack of knowledge of the adequate Hungarian words, and Éva and Leon also stated that it is much easier to speak in this particular way than to try and find the adequate Hungarian equivalents as it would only cause more misunderstandings during conversations considering that most people are already used to the Serbian, English, or occasional Croatian and Bosnian terms.

Section *D* (see Appendix 2) of the interviews also uncovered that the participants regularly visit Vojvodina Hungarian Facebook groups often to share or read about fellow Vojvodina Hungarians' experiences, ask for advice, or to connect with people who think

similarly to them. Their experiences in these groups vary between positive and neutral, however, both Dániel and Emese mentioned that they often saw posts and comment sections in some larger Hungarian Facebook groups (group orientations often include cooking and baking, marketplaces, and travel) where minority Hungarians (not only from Vojvodina but all around Hungary's outside borders) are corrected and ridiculed for their linguistic practices, choice of vocabulary, and sometimes even for their origins – usually by majority Hungarians from Hungary. Dániel also mentioned that these acts of discrimination are also sometimes present in Vojvodina Hungarian Facebook groups, but to him, it is seemingly much less frequent (similar findings in: Pásztor-Kicsi 2016; Jánk and Rási 2023).

5.2.3. Overlaps: Factors affecting language choices in digital spaces and face-to-face contexts

Lastly, to address Research Question 4 as well, regarding what factors affect their language choices in digital settings, the interviewees generally mentioned the same things as in the questionnaire forms. The third section (Appendix 2, section *C. Digital habits and linguistic practices online*) in the interviews that focused on digital habits and general linguistic practices online unveiled that, generally, those who spoke languages other than Hungarian well (i.e., mainly English and Serbian), consumed content and communicated in those languages on a regular basis. Most frequently, their own language choices depend on what language they saw comments or online content in, but the type or topic of the content was also often mentioned as the most decisive factor. The interviewed participants also shared that there are situations, where they intentionally switch between languages or choose another language than that of the content to express their linguistic, national, and cultural identities (see also Li 2011; Androutsopoulos 2015) and simultaneously indicate their ties to Vojvodina Hungarians, Serbia, or even the Balkan region. Similarly to digital settings, translanguaging and switching between languages one speaks is also an integral part of the Vojvodina Hungarians' face-to-face conversations (Aleksić and García 2022; Mandić and Rácz 2023).

Emina experiences this on a regular basis both in her private and professional life online and offline alike, and her example illustrates how there is a clash between traditional linguistic expectations (at home specifically from her grandmother) and her new reality at her workplace. Through a personal example, Emina also contrasts her upbringing and the past, when her grandmother was an authoritative figure and very strict with linguistic boundaries, with her current professional life and the present, where she is now navigating a highly multilingual

reality. This creates an axis of differentiation (Gal and Irvine 2019) between generations and their respective beliefs about 'proper' linguistic practices. In this context, at one end of the axis lies the socially lesser valued "salad language," which is a term her grandmother used to describe multilingual practices, while on the other side lies what is socially presumed to be the more desired 'norm': a belief in monolingualism and the ideological 'purity' of named languages.

(6) *"Amúgy ez nekem személyesen nagyon érdekes de nem is normális dolog egyszerre, mert egész életünkben úgy lettünk tanítva, hogy nem épp olyan mindegy hogy beszélünk majd a munkán vagy a községházán. Nekem a mama mindig azzal jött amikor másodikos középsulis voltam, hogy még véletlenül sem beszéljem ezt a saláta nyelvet amit a Janával szoktunk otthon, mert úgy kitesznek a hivatalból, hogy na. Aztán egyszercsak becsöppentünk egy ilyen <u>full serious</u>* atmoszférába, hahahah bocsi, ilyet ugye szabad mondani? […] Na szóval, és egy ilyen atmoszférába kerülünk, aztán meg a tőled 15 évvel idősebb **séfed***** [főnököd] olyan lazán meg össze-vissza beszél veled, hogy csak pislogsz! Tehát tényleg nem erre számítottunk amikor elkezdtünk dolgozni, ugye Jana?"*
"By the way, this is personally very interesting to me but also kind of crazy and the same time, because our whole lives, we were taught that it really does matter how we talk at work or at the city hall. My grandma would always warn us when we were in our second year of high school that we should under no circumstances speak that 'salad language' that Jana and I use at home [mixing English, Serbian, and Hungarian], because they would kick us right out of the office. Okay, maybe it wasn't that serious but if I'm being honest, I don't think I ever heard people talking like that back then. So it really is shocking that now, all of a sudden, being dropped into this totally serious atmosphere, hahahah, sorry, is it okay to say things like that? [she asks referring to the expression '<u>full serious</u>' that she used while talking in Hungarian] […] Well, anyway, we get into an atmosphere like that, and then your **boss** [said in Serbian in the original quote], who is 15 years older than you, starts talking to you in the most casual and chaotic way possible, and you can only blink repeatedly at them in response! So we really didn't expect this when we started working here, right Jana?" (Emina)

Emina's personal experience explains why she was and still is stunned by this realization. Based on her grandmother's warnings and what she actually experienced in public and official settings back when she was a teenager, her expectations still reflect a belief in the socially perceived importance and 'purity' of named languages. In this context, linguistic 'purity' is seen as a

requirement for success in one's professional life, while multilingual practices are understood to be as a deviation from the 'norm.' However, the actual reality she finds herself in in terms of linguistic practices at the workplace is strikingly different to these expectations. What her grandmother referred to as "salad language," Emina now regularly uses with her boss and colleagues and is gradually getting used to the idea that translanguaging is no longer just an integral part of her private communicative practices, but her professional ones too, indicating that there is a gradual shift taking place in what is considered to be appropriate linguistically in professional settings. While monolingual linguistic practices were previously presumed to be the only valuable practices in professional contexts, the linguistic practices of Emina's boss indicate that these values and beliefs are shifting and the axis of differentiation is being renegotiated. In this new sense, the "salad language" is the one that is now being practiced by authoritative figures, shifting what are perceived to be competent linguistic practices in professional settings.

In response to Emina's experience, Jana's reply adds to this, as her extract also illustrates how she rationalizes her own linguistic practices in the context of her workplace, however, she specifically focuses on external factors such as stress and the need for efficiency when explaining why she engages in translanguaging instead of adhering to a single named language:

(7) *"Igen, és tényleg, igazából mindenki úgy mondja, ahogy eszébe jut és gyorsabb. Emailekben például, amiket egymás között vagy a más városokban levő bankjaink között küldünk, azokban is annyiszor látunk és írunk keverve angolt a szerbbel, de a magyarral is ha éppen például az Eminának vagy Gábornak írom az emailt. Nagyon stresses tud lenni ez a mi munkánk* ***savetnik****ként*** [pénzügyi tanácsadóként], főleg így a* ***klijent****ekkel*** [kliensekkel] és egyszerűen néha nincs arra időd, hogy keresgessed a szót magyarul vagy szerbül, ugye éppen attól függ kivel beszélsz és az ő anyanyelve micsoda. És ritka is az, amikor mondjuk nem angolul vagy szerbül mondjuk ezeket a szavakat. De ez full* normális, a kompikon is így írja mindenkinél, angolul vagy szerbül, szóval értjük mit akar mondani a* ***kolega***** *[kolléga]."*

"Yes, and truly, everyone basically says things whichever way it comes to their mind and is the fastest. In emails, for example, the ones we send to each other or to our other banks in different cities, we so often see and write in all sorts of ways, mixing English and Serbian, but also Hungarian if, for example, I'm writing the email to Emina or Gábor. Work in finance as a **financial adviser** [said in Serbian in the original quote]

> can be very stressful, especially with **clients** [said in Serbian in the original quote], and sometimes you simply don't have the time to rack your brain for a word in Hungarian or Serbian, depending on who you're talking to and what their first language is. And it's also so rare when we don't say these words in English or Serbian, for example. This is completely normal, even on the computers these terms are written in English or Serbian for everyone, so we understand what our **colleague** [said in Serbian in the original quote] wants to say." (Jana)

Jana's response gives a lot more insight into what Emina was talking about, as she provides specific examples of the practical aspect of translanguaging in their line of work. For Jana, translanguaging among colleagues at work is perceived to be a strategic tool for effective and straightforward communication, especially in cases when their work becomes stressful and when they have to deal with clients, who are often older and retired individuals not used to technology or the idea of it. When Jana explains her multilingual practices as a result of stress or need for efficiency, she is ideologically justifying her choices and is portraying the practice as a necessity rather than, for example, a personal preference, which is how she is able to ideologically reconcile her linguistic practices with the ideological construction of named languages. Her experience demonstrates that being multilingual and knowing how to effectively and strategically navigate various contexts is not just a social skill, but a crucial necessity in today's fast-paced and global workplaces (Räisänen 2018). Similarly to Emina's example above, Jana's also illustrates how within this modern professional environment, efficiency and comprehension, and, therefore, multilingual practices, are becoming valued and viewed as indicators of competence, which is understood to justify moving away from socially constructed monolingual communicative norms. In this way, Jana is able to maintain her professional identity at work, where translanguaging is understood to be a sign of competence and efficacy rather than a lack of linguistic proficiency.

To also provide some insight into translanguaging in less professional, everyday settings, Emese's experience illustrates how she is able to rely on these practices to negotiate her minority position in public spaces and also establish an equal standing between Hungarian and Serbian. In her example, she talks about her communicative practices in public spaces, specifically farmer's markets, where multiple languages and cultures intersect and speakers are described to adapt to their interlocutors for various reasons:

(8) *"Nálunk itt Vajdaságban az teljesen mindennapos dolog, hogy néha magyarul beszélünk, néha pedig szerbül szólalunk meg, de még az is, hogy néha össze vissza, kinek hogy sikerül vagy hogy a könnyebb. Valamelyik nap épp a zöldpiacon voltam és először szerbül szólaltam meg – ez is egy ilyen szokás nálunk, mert ugye több a szerb, és előfordul, hogy végig szerbül beszélünk a másikkal, aki egyébként szintén magyar, de hát így szoktuk meg és nincs ezzel semmi baj. De olyan is volt már, hogy én szerbül beszéltem valakivel akiről tudtam, hogy szerb volt, ő pedig magyarul válaszolt nekem vissza és az egész beszélgetésünk így folyt."*

"Here in Vojvodina, it's quite an everyday thing that sometimes we speak Hungarian, sometimes we speak Serbian, but there are occasions where we continuously use both of the languages, and it really depends on what way of speaking is easier. The other day I was at the market and started speaking in Serbian out of habit. Considering that there are more Serbs, we sometimes tend to carry out whole conversation in Serbian even with people we don't know are Hungarians, but that's okay, this is what we are used to and there's nothing wrong with that. But there have also been times when I spoke Serbian with someone I knew was a Serb, and they answered me back in Hungarian, and the whole conversation went on like that." (Emese)

From Emese's perspective, these interactions are a result of her and her community's linguistic habits (starting conversations in Serbian due to it being the majority language), or because it is easier for interlocutors to communicate in such multilingual ways. In these contexts, the socially expected linguistic practices are monolingual Serbian, which she also touches on when mentioning how the number of Serbian speakers surpasses speakers of Hungarian (and other minority languages) in the region, and this is something that also has an influence on which named language is going to be the primary choice of the speaker. While she claims that these are most often instances of habit, Emese is strategically making her first language and minority identity more visible by fusing it with Serbian or making sure it appears alongside Serbian in public spaces. The socially constructed roles of a 'dominant' Serbian and a 'subordinate' Hungarian in the context of Vojvodina are also challenged by Emese and her interlocutors when they switch their positions, which highlights how they can flexibly (and constantly) renegotiate their social standing and go against the institutionally dominant view which erases (Gal and Irvine 2019) any degree of language mixing. As Schuchardt (1882: 868, as it appears in Gal and Irvine 2019: 268) contends, "[l]anguage is not an object, it is the product of an acting subject," which is neatly demonstrated by Emese's experience.

Moreover, being able to communicate digitally makes it possible to maintain familial, work-related, and other connections surpassing physical obstacles. Another very important function digital spaces have for the Vojvodina Hungarians is access to all sorts of information ranging from the local and more personal all the way to the global level. When compared to what was available on the internet and in what language 20–25 years ago, as Gábor explained (Quote 5) this is an invaluable possibility. Ultimately, these instances that the participants shared show that both digital and face-to-face interactions are not solely instances of passive and habitual linguistic practices, but instances where these speakers are actively negotiating and renegotiating their social positions. These examples underscore the flexibility of linguistic practices and foreground the restrictive nature that social expectations and each individual's own life story have on their linguistic practices and social standing.

5.3. Digital linguistic practices: The Vojvodina Hungarian way of translanguaging

In light of the participants' life stories and multilingual experiences discussed above, the current section presents a few examples of their translanguaging practices. The analysis of the 16 screenshots the participants shared and talked about during the interviews revealed that they often found themselves not only switching between languages in conversations online or offline out of habit and convenience (Figures 27–34), but also intentionally translanguaging (Figures 35–41) to signal their belonging to specific communities (Cenoz and Gorter 2017, 2019). This section discusses the 16 provided screenshots, firstly addressing those that were described by participants as messages containing practical and habitual translanguaging, and then it moves on to discussing those messages that contain intentional translanguaging. All of the included figures below depict the screenshots the participants shared in their original forms and English translations can also be found next to them. Next to each screenshot, a translation is given, in which all of the messages are marked indicating what language each sentence/word was written in in the original (<u>underlined words</u> with * indicating English, ** indicating Hungarian, and **words in bold** with *** indicating Serbian). Considering that some of these cases include instances of Serbian and English loanwords too, this is also clearly indicated in brackets. The only screenshot that is monolingual out of the 16 is Dorina's publicly posted Facebook post (Figure 26), which was written in relation to education and degree accreditation in a Vojvodina Hungarian group. Aside from the latter, all other messages contain Hungarian with Serbian and/or English to varying degrees.

5.3.1. Practical and habitual translanguaging in digital communication among Vojvodina Hungarians

As mentioned above briefly, a total of 8 screenshots were categorized as having translanguaging examples that either happened out of habit or served a practical function as opposed to being used intentionally, based on how the participants made sense of them. These screenshots were shared by Dorottya (Figure 13), Jana (Figure 14), Emina (Figure 15), Endre (Figure 16), Levente (Figure 17), Luca (Figures 18 and 19), and the last one by Dániel (Figure 20). The first screenshot was Dorottya's (Figure 13), a conversation between her and her sister in a distressing moment, while Jana's (Figure 14) example was a series of messages in which she was anxious about a work-related task asking Gábor for his help. Emina (Figure 15) first shared and explained a screenshot of her and her father's conversation about him picking her up from the bus station, which was followed by Endre's (Figure 16) messages to his father discussing some casual things related to housework. In Figure 17, Levente's messages to his wife asking about the process of scheduling a work-related medical appointment can be seen, while Figures 18 and 19 are Luca's messages, which include a short conversation with her best friend (Figure 18) discussing a meetup, and a reminder she sent to one of her younger clients (Figure 19). Lastly, Dániel's (Figure 20) was a snippet of a private Messenger conversation with his younger brother asking him for a favor in a rush. In the following analysis, the 8 screenshots will be discussed in groups focusing on specific functions that translanguaging fills in their messages to friends, family, and clients.

To begin with, the first two examples shared by Dorottya (Figure 13) and Jana (Figure 14) showing their texts to their family members and close friends below illustrate how translanguaging often takes place when speakers are experiencing emotional distress and pressure due to external factors. In these moments, instead of adhering to one named language, the participants rely on their entire linguistic repertoire to express how they feel in the most accurate way possible. For Dorottya and Jana, for example, anxiety and stress seem to trigger this, which results in more impulsive messages such as "I CAME OUT TO HAVE A GOOD TIME AND I'M HONESTLY FEELING SO ATTACKED RIGHT NOW. 😭 😭" or "da mu ja proveravam izvwstaj [misspelling, the intended word: izveštaj] procenitelja???? 💀 💀*** (translation: Am I seriously supposed to review an appraiser's report for him???? 💀 💀). As Chen (2007) also notes, expressing strong emotions in uncomfortable or unexpected situations is often among the primary reasons for engaging in translanguaging.

Figure 13. Dorottya's messages to her sister.

Translation:

Person A
I CAME OUT TO HAVE A GOOD TIME AND I'M HONESTLY FEELING SO ATTACKED RIGHT NOW. 😭😭*
He said people like it*
I don't like it but I am a people too*

Person B
🤣🤣🤣
Seriously though*
I think we should** ditch* the plan**
It doesn't sound too convincing**

Person A
I don't think it does either**
I'm going to go back [home]*, wait for mee*

Person B
Okay* I'll be waiting for you**

As Dorottya explained, her messages to her sister were in relation to a social gathering (unnamed due to the sensitivity of the topic for the interviewee) the two sisters were planning to go to after Dorottya has learned more about it from an acquaintance of theirs. As it turned out, it was anything but what they imagined and decided against going. On the other hand, Jana's messages were to Gábor in relation to a difficult task at work which she was not yet familiar with at that point in time. Both Dorottya and Jana explained that they often switch back and forth between Hungarian and English (as well as Serbian in Jana's case) in situations where they are under emotional distress without really realizing that they are doing it.

Figure 14. Jana's messages with Gábor: asking for help at work.

Translation:

Person A
HELP*
Dude I'm losing it for real, for real*
[Our boss] has lost his mind**
Am I seriously supposed to review an appraiser's report for him???? 💀 💀 ***
Come on!***
I have never done that before**

Person B
Oof***
When does he need it?**
Can it wait till 1:15??**

Person A
YES**
You're an angel 🫶 😭 **

In these particular examples above, both women switch to English first, and as Jana explained, she also uses Serbian to talk about particular things related to her and Gábor's work as she says it is easier and more efficient in their work environment (see also Quote 7). Additionally, their immediate environments can also explain why Dorottya only uses English in these messages, and Jana uses both English and Serbian (such as her fourth and fifth messages in Figure 14). While Jana is in Serbia where she is more frequently surrounded by Serbian, Dorottya is studying in Hungary where she less frequently comes into contact with Serbian, which could also potentially influence her translanguaging practices (aside from Serbian being her second language), however, she did not address this in detail during the interview. While it does seem like an intentional and strategic choice, they both contend that these instances were not the results of pre-planned and intentional strategy, but were driven by unconscious and habitual choice rather, which happens in such situations because it is the easiest, quickest, and most direct way to get their message across, especially to those who are close to them and they share common languages with.

While they explain and rationalize these instances where English or Serbian is fused into their messages as accidents or habit, looking at the examples more closely reveals that they are actually creating boundaries between public and private, both by sending private messages to another person close to them, but also by practicing translanguaging, they are distancing themselves a bit from their immediate physical surroundings. This is especially evident in Dorottya's case, as she is out in a public space in an uncomfortable situation, which she handles by translanguaging in a space she perceives to be safe with her sister, creating her own digital safe haven. On the other hand, Jana is also in a similar situation, however, her choice to translanguage might also be driven by an underlying desire to match her boss' social and professional standing or expectations, even if she is not directly addressing him. When she uses Serbian equivalents (names) of the tasks that she was asked to take care of, she is renegotiating their positions and perhaps trying to mitigate the fact that she does not feel too confident in herself to carry out the task at hand. In this context, relying on translanguaging, and especially on Serbian is what allows her to upkeep a professional image even despite feeling like she is incompetent. Additionally, by dismissing and simplifying (a form of erasure) these cases of translanguaging as accidents or habits, they are shielding themselves from appearing like they are intentionally going against the ideologically constructed ideal of the "pure" monolingual speaker.

In addition to emotional triggers, participants also often explained their translanguaging practices occurred as a result of long-standing habits in family interactions. In these instances, translanguaging does not take place as a reaction to a specific trigger or event, but is rather a reflection of the participants' language history with their families (Grosjean 2010). Similarly to Emese (Quote 8), habitual translanguaging tended to be explained as an integrated, unconscious, and natural part of the linguistic practices of most of the Vojvodina Hungarian participants who gave interviews. By looking at the following chat conversations in Figures 29–31 between the participants and their immediate families, we can see how certain Serbian terms become an important part of the Vojvodina Hungarian identity.

In the first screenshot, Emina can be seen writing to her father, informing him about her travel home and how she might not make it on time as they previously agreed. Like Jana, Emina too has said during the interview that she is bilingual (Hungarian and Serbian), just like her father. While she speaks mostly Hungarian with her mother, it is different with her father, with whom they tend to mix Hungarian and Serbian ever since she was little, and it is what they are used to.

Figure 15. Emina's messages to her father: arriving home on time.

Translation:

Person A
Daaad***
I'll only arrive at the station at 16:10**
There's no chance I'll be able to catch it***
But I'll hurry**
Maybe [I'll still catch the bus]**

Person B
Ok. I'll be in the office but call me and I'll come get you !**

Person A

When she addresses her father or her grandfather, she explained that she has always used the Serbian terms ***tata*** "dad" and ***deda*** "grandpa," as the Hungarian ones were never really used in their family on her father's side and it simply "stuck" with her, as she explained. Additionally, like in the two cases above (Figures 13 and 14), in this particular case her translanguaging was also influenced by the situation's urgency when she wrote the third message ***nema šanse da ja to stignem*** "there's no chance I'll be able catch it [=the bus home]" which will also be a factor in Dániel's example in Figure 20.

Endre's and Levente's chat conversations with family can also be mentioned in this category, where translanguaging is a habitual practice: sometimes at the level of words, sometimes at the level of entire sentences. In both Endre's and Levente's examples, the messages are written in Hungarian with some Serbian. Most of the translanguaging takes place when they are addressing their family members out of habit (these include: ***majko*** "mother," the common Serbian expression ***gde si ćale*** (also often shortened as ***di si ćale***) "what's up, dad"), which can also be seen in Emina's messages as well.

Figure 16. Endre's messages with his father about basic housework related things.

Translation:

Person A
Dad where are you*** = Are you here?
Did the** **majstor***** not say if he's coming back today?**
I might need the** **zip ties***** for the gate if he won't take them.**

Person B
Hey**
He won't be coming, you just go ahead and take them.**

Person A
Ok**
Didn't ** **mom***** ask about the deck chairs?**
Because I took them up to the attic, so they won't be left outside in case the frost comes.**
She wasn't home yesterday and I couldn't tell her about it.**

Furthermore, in Endre's and Levente's messages, there are also expressions that they use in cases when they want to name specific actions, people, and things such as: ***majstor*** "repairman," ***vezice*** "zip ties," ***zakazivanje termina*** "scheduling an appointment," and ***izdavanje knjižice*** "issuing a new health card." These latter two examples were described by Levente as *szokásos*** ***izrazok****** *amiket mi itt használunk és megszoktunk*** "**expressions** we have gotten used to and use regularly here [in Vojvodina]"), which they simply use to avoid misunderstandings and more importantly, because it makes communication more effective and straightforward. Endre also mentioned that these expressions often make more sense in the Vojvodina Hungarian context, and it would be more uncomfortable and inconvenient if he started using the Hungarian equivalents of some of the expressions he tends to use.

Figure 17. Levente's messages with his wife asking about scheduling appointments.

Translation:

Person B
Why are you asking, what do you need it for?**

Person A
Scheduling an appointment***
and** **issuing a new health card*****
Because [my colleague] didn't tell me and these people here don't know the procedure either.**

Person B
I'll look into it in a second and let you know if you're not in too much of a hurry.**

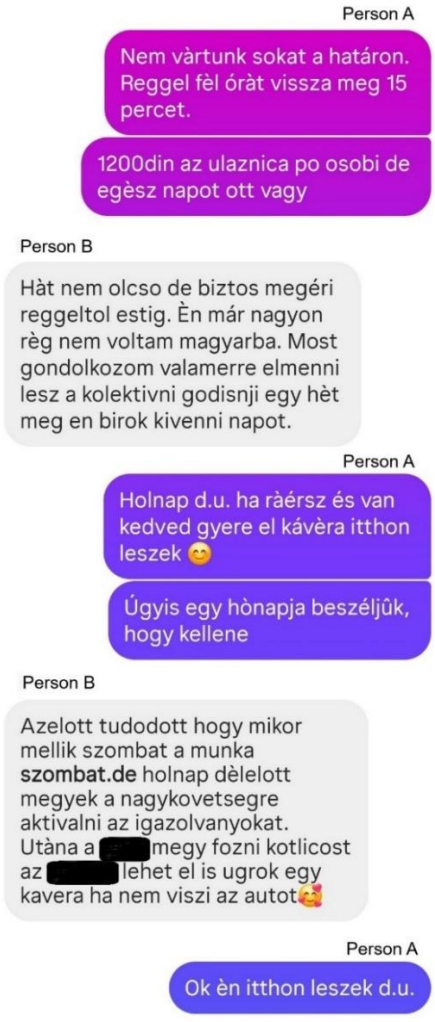
Person A
Alright*** [Serbian loanword] if you can.**
Yes, I'll wait because the queue isn't moving anyway.**
Thanks, honey.**

Taking a closer look at these linguistic practices among family members reveals that what the participants understand to be solely habitual practices, are also their way of expressing their local Vojvodina Hungarian identities. By using the Serbian equivalents for family members (e.g., *tata* "dad" and *majko* "mother") or for specific tasks and notions (e.g., *majstor* "mechanic" and *termin* "appointment") among a variety of other things, the participants are ideologically justifying or reconciling (Gal and Irvine 2019) their multilingual practices by claiming that it 'makes more sense' to engage in translanguaging among a group or family of Vojvodina Hungarians than to adhere to a single named language in communication. In a way, they are iconizing the use of Serbian terms in Vojvodina Hungarian speech (beyond the level of already established loanwords and calques), creating "[i]deologized visions" through linking "differences in expressive features linguistic and otherwise – to cultural images, constructing stereotypes of people and activities, and rendering them convincing" (Gal and Irvine 2019: 2). Moreover, their chat conversations are also illustrating fractal recursivity (Gal and Irvine 2019), where the region's multilingual reality is being projected onto their own private familial circles and interactions, however, the roles of Hungarian and Serbian are reversed and renegotiated within this context, as Hungarian remains their primary choice of language, while Serbian acts as more of a marker of their Vojvodina Hungarian identity.

Translanguaging was also described as a habitual practice by Luca (Figures 18 and 19) and Dániel (Figure 20), however, with the exception of Luca's first screenshot (Figure 18), the

other two are taking place in a more professional and public context. In Figure 18, Luca's conversation with her close friend can be seen where they both engage in translanguaging, while in Figure 19, Luca is reminding a client of hers to send her the inspirational photo based on which she wishes Luca to do her nails. What we can see in Luca's first example (Figure 18) is that despite only her first messages being inclusive of translanguaging, her best friend also keeps practicing translanguaging throughout the rest of their messages. When asked to explain her messages, Luca was unsure at first about the exact reason why she and her best friend tended to communicate in this way. She began by mentioning that she often finds herself using Serbian terms and expressions in instances where she cannot recall a word or phrase in Hungarian, but she went a bit further in trying to find another reason behind their translanguaging by reflecting on their shared childhood.

Figure 18. Luca's messages with her best friend: chatting about how they spent their weekends and planning a meetup.



Translation:

Person A
We didn't wait too long at the border control. 30 minutes in the morning and 15 minutes on our way back.**
The entrance fee was 1200 RSD per person***
but you can spend the whole day there.**

Person B
Well it's not cheap but it must be worth it if you're staying from the morning till night.** It's been so long since I visited Hungary. I'm actually thinking about it right now that we [her family] should travel somewhere during the** **annual collective leave at work***** that lasts a week and I can also ask for a few days off in addition to that.**

Person A
If you're free tomorrow afternoon and you feel like it, come over for a coffee, I'll be home 😊 **
We've been talking about meeting up for a month or so now anyway**

Person B
Back then you always knew which Saturdays were working days, but tomorrow I'm going to the embassy to activate our identity cards.** After that [my husband] is going over to [his friend's]** **to cook stew***** so I might come over for a coffee if he doesn't take the car 🥰 **

Person A
Ok I'll be home tomorrow afternoon**

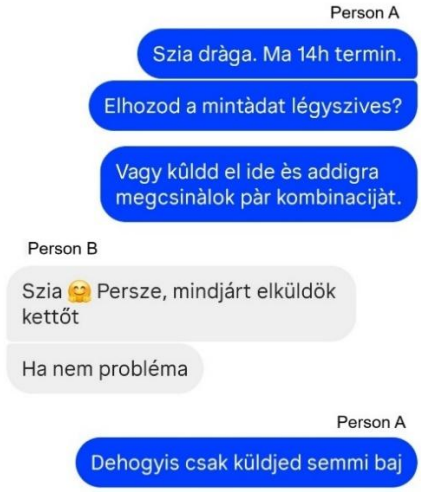
As she explained, one of the potential reasons they keep translanguaging with her best friend even today could be that her best friend is from a mixed marriage (Serbian father and a German–Hungarian mother). Since they used to spend a lot of time at her friend's home during their childhood, where translanguaging was an everyday occurrence, she also picked up the habit. When Luca reflects on her friend's mixed-marriage background, she is ideologically justifying (Gal and Irvine 2019) her current translingual practices through their shared personal history. She ties the occurrence of translanguaging to having grown up in a bilingual environment with her friend, which is what she relies on to reason why it is a habit instead of a conscious and active choice.

Similarly to Emina, Endre (Figure 16), Levente (Figure 17), and Luca (Figure 18) all explained that their translanguaging, specifically within their familial interactions and with very close friends in Luca's case, was most frequently a practice of habit and rarely a conscious and direct strategy, although they did highlight that there are situations where their choice to engage in translanguaging is a fully conscious and intentional one, which is addressed in more detail in the subsequent section.

What stands out when comparing all of these screenshots from Figures 13 to 18 (excluding Figure 15), is that English tends to be only present in the messages of the younger individuals either without Serbian or along with some Serbian, while Serbian is more frequently present in the messages of the older participants with English being absent. While Endre did mention that he knew some English on a conversational level, he also emphasized that it was not that usual to use English within his community, work, and immediate environment as opposed to the younger participants, who found themselves frequently using it with their friends, and sometimes even with family.

The following example is Luca's messages to her client in Figure 19, where Luca uses the Serbian expressions ***termin*** "appointment" and ***kombinacija*** "combination" when referring to terms related to her work. Although these examples are similar to the previous ones in the sense that they are both used out of habit and convenience, the main difference is that these messages are directed towards a client, who is not in close contact with Luca.

Figure 19. Luca's messages to a younger client: asking for client's inspirational nail art photos for their appointment.



Translation:

Person A
Hello dear!**
Appointment*** [Serbian loanword] today at 2PM. **
Could you please bring your inspiration photo [for your nails]? **
Or send it here and I'll make a few design**
combinations*** by then. **
Person B
Hi 🤗 Of course, I'll send two**
If that's okay with you**
Person A
No problem, go ahead**

Despite Luca not knowing her client personally, she still uses Serbian and Hungarian interchangeably both in messages and during her sessions at work in person. She explained that it is something she is used to doing, often because it is easier to express herself and because there are certain terms that she tends to refer to in Serbian only. Compared to her interaction with her close childhood friend, in this more professional context with her client, Luca might also be relying on Serbian terms to signal that she is also an equal member of the wider local businesses as a Vojvodina Hungarian. In a way, she is also actively shaping her own image and professional identity through iconizing the use of Serbian terms to credibility and competence, similarly to Jana (Figure 14).

Lastly, in addition to the reasons discussed above in Jana's (Figure 14), Levente's (Figure 17), and Luca's (Figure 19) cases in particular, translanguaging was also described to be a convenient strategy predominantly when participants found themselves in a hurry (Emina's example too in Figure 15), as can be seen in the case of Dániel (Figure 20). As Dániel explained, this chat conversation with his brother was a result of him previously getting a ticket for red-light violation, and the post office was making things more difficult than usual by asking for his ID, which he forgot to bring with himself. Seeing as the payment due date was on the same day and the closing time was nearing too, this made the situation even more stressful and urgent for him. Similarly to the other examples discussed above so far, Dániel also maintained that he did not stop and think about how he was going to formulate his message to his brother

considering that he was under pressure and in a situation where time was running out and he had to act swiftly to avoid further problems.

Figure 20. Dániel's messages to his younger brother: asking for a favor.

Translation:

Person A
hey [brother's name]**
are you at home?**

Person B
yep what is it**

Person A
I came to the post office but** **my ID***** [Serbian loanword] is not with me and they need it for** **the fine payment slip***** and they're closing at noon and if I don't pay it now, I'll get** **a fine***** I won't be able to pay**

Person B
alright*** [Serbian loanword] I'll get it to you
where are you**

Person A
counter*** [Serbian loanword] number 7**

Person B
I'll hurry**

Person A
thanks bro**

As we can see in the example above, he used the Serbian words ***kazna*** "fine" and ***uplatnica*** "payment slip," and some Serbian loanwords like ***lična*** "ID card" and ***šalter*** "counter," which, from his perspective, happened as a result of a stressful and serious situation. However, a closer look at the interaction might suggest that his choice to refer to these terms by using their Serbian equivalents is inherent in his desire to separate his private life from the administrative and official world, or even to signal to his brother that the situation is urgent. In this context, the use of the Serbian terms carries an authoritative weight, while the majority of his messages, including the address term he uses for his brother, remain Hungarian and remain the language of familial communication. From a different perspective, Dániel's example also illustrates erasure (Gal and Irvine 2019) as his choice to refer to these terms using their Serbian instead of their Hungarian equivalents indicates that he is disregarding the potential for Hungarian to function in this official domain.

As can be seen in the examples above, the Vojvodina Hungarian participants often tend to practice translanguaging out of habit and practicality. Based on their explanations, this

behavior is not always a conscious choice but often occurs instinctively in situations where participants encounter urgency, distress, and anxiety, as we could see in the messages between them and their families, friends, and acquaintances. In many of the cases, these messages help the participants convey emotions and get their point across more effectively and precisely, often by relying on multimodal resources, such as emojis as can be seen in the above examples.

5.3.2. Intentional translanguaging in digital communication among Vojvodina Hungarians

On the other hand, there were also cases where the participants confidently claimed that they engaged in translanguaging intentionally and with specific goals in mind. From the 15 private conversations with friends, family, and larger groups of people, a total of 7 cases can be mentioned here that illustrate strategic translanguaging within a variety of different topics and contexts. These screenshots were shared by Dániel (Figure 21), Levente (Figure 22), Leon (Figure 23), Emina (Figure 24), Dorina (Figure 25, and the public post Figure 26), Dorottya (Figure 27), and additionally, Gábor's group chat with Emina, Jana, and other colleagues of theirs, which only partially included intentional translanguaging from Gábor's side (Figure 28).

Dániel's (Figure 21) series of messages were responses discussing what it is like to be a Vojvodina Hungarian and being able to understand inside jokes, and what it means to the interlocutors to share a common language, culture, and lived experience with fellow Vojvodina Hungarians. In Figure 22, Levente can be seen discussing a tire change with his close friend, and Figure 23 is Leon's short conversation with a fellow retired colleague talking about the planned innovations at their old firm that they heard about. Then in Figure 24, Emina's private messages with Jana can be seen talking about planning a Facetime call while working from home. The subsequent two screenshots were ones that Dorina shared: Figure 25 shows a snippet of a conversation with her best friends, who are also studying at the University of Szeged, gossiping about one of their old classmates who they are not too close to, from which any personal and sensitive details were omitted, while Figure 26 is her public post she shared in one of the Vojvodina Hungarian Facebook groups. The following screenshot was Dorottya's (Figure 27) with two of her friends discussing a birthday meetup with other friends, and lastly, Gábor's group chat conversation is depicted in Figure 28, where he and his colleagues are talking about a specific case at their workplace. Similarly to the subsection above (5.3.1), the present one too will discuss the 7 screenshots that include intentional translanguaging according to themes that emerged during analysis and the interviews.

To begin with, Dániel's (Figure 21) example emphasizes how important he finds the expression of one's cultural and linguistic membership and belonging in certain situations. In Figure 21, we can see a screenshot Dániel provided, which was a series of messages reacting to a message from another Vojvodina Hungarian within a larger Vojvodina Hungarian Messenger group chat. The message they were reacting to was a humorous short text written in Hungarian by Dániel (the first message in blue in Figure 21), filled with Serbian borrowed words and expressions that elicited mixed responses.

Figure 21. Dániel's messages in a Vojvodina Hungarian group chat.

Translation:

Person A
People*, there is such a** **crowd***** [Serbian loanword] here at the border that I have never seen so many** **[goods] smugglers***** [Serbian loanword] before... the Hungarians will have a reason to come to the** **flea market***** this** **weekend***** 🤣 👍

Person B
Oh, what nonsense

Person C
What's wrong with it?! We also speak like that at home, only the other way around!!! We weave Hungarian words into our Croatian mother tongue. I am proud of this!!!!**

Person D
Now that's real Hungarian speech** 😀 **oof, I'm going to go the flea market then tomorrow***** 👍 thanks for the information**

Person E
What are you talking about here, this doesn't look like anything

Person A
So what?*** It's not like you didn't understand what I wrote** **Come on, man*****

Person D
Please, don't act like you don't actually speak like that in reality**
Well shoot*, that's how it is**

Despite the original message being written in Hungarian, the people responding, Dániel included, sometimes chose to reply in Serbian and instead combine Hungarian words and expressions into their comments. Dániel clarified that his linguistic choices were deliberate when writing his responses and were meant to signal that those who spoke both Hungarian and Serbian could easily understand one another even if the messages contained translanguaging. Similar reasons were mentioned by Éva and Leon, who talked about communication with other

Vojvodina Hungarians in face-to-face situations. Dániel's translanguaging instances included the use of the Serbian word ***ljudi*** "people," the Hungarianized version of the Serbian loanword ***gužva*** "crowd," the Hungarianized version of ***granica*** "border," the Hungarianized version of the Serbian loanword ***švercer*** "smuggler of goods," the Hungarianized version of the Serbian ***buvljak*** "flea market," and the Hungarianized version of the Serbian ***vikend*** "weekend." This exchange depicted above also shows an example of the phenomenon of stylization (Rampton 2017), where the participants (mainly Dániel, i.e., Person A, and Person D) are intentionally performing a specific Vojvodina Hungarian identity through consciously exaggerating some of the most common local linguistic features. This is mainly achieved by using an unusually high number of loanwords within a single interaction at once, with the underlying goal to signal their local belonging and their shared Vojvodina Hungarian identity. In this conversation on Facebook Messenger, 4 out of 5 individuals expressed that they regularly engage in translanguaging, while Person E and to some extent Person B expressed their disagreement with this way of speaking. As we can see, Person D and later Dániel (Person A) too decided to mix in Serbian when responding to Person E's and Person B's messages, which Dániel meant to signal that he does not necessarily differentiate between his spoken languages here, and instead, views both equally as important in his life.

While the examples he brought do not contain any English and he did highlight that he does not feel too comfortable with using English, Dániel still talked about instances where he makes himself overcome his own insecurities and uses words and expressions from English (and sometimes from German too) with friends and with strangers on the internet (e.g., TikTok comments). Most frequently, this takes place in situations where he cannot recall the word or phrase he is looking for in Hungarian or sometimes in Serbian, but there are also various cases where he intentionally switches between Hungarian, Serbian, and/or English. In those instances, his choices are deliberate and he intends to get a message across with underlying meaning, often to signal particular aspects of his identity, whether that is his national, linguistic, or shared cultural identity:

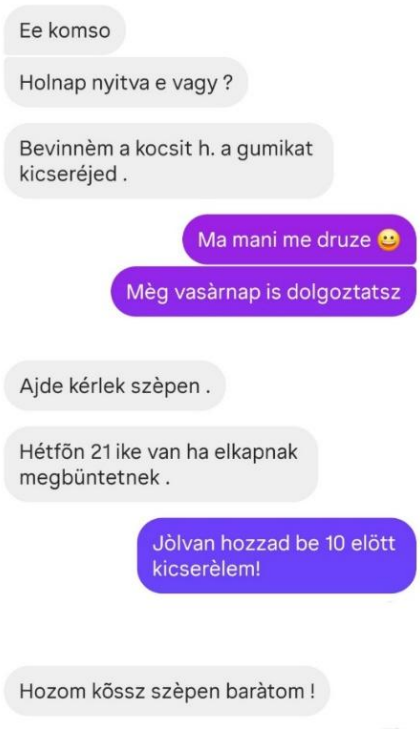
(9) *"Sokszor fordul elő, hogy mondjuk nem jut eszembe a szó vagy terminus, emiatt mondom inkább szerbül, de sokszor angolul is attól függően, hogy kivel beszélek. Ha az illető nem tud angolul vagy szerbül, akkor igyekszem nem bedobálni szavakat azon a nyelven, de néha nem tehetek róla és kicsúszik. Viszont kifejezetten vannak olyan pillanataim is, amikor teljes mértékben tudatosan csinálom. Ez például egy focimeccsen is előfordult magyarban [Magyarországon], amikor a magyarok ellen játszottak a*

szerbek és épp nekik szurkoltam, mert hát ugye büszke vagyok a származásomra. Vajdaság más mint a Magyarország, teljesen más a mentalitás, nyugisabb és jobban érzem a magaménak."

"It often happens that I can't recall a word or a term [in Hungarian], and that is the reason I say it in Serbian, sometimes also in English, but that really depends on who I'm talking to. If I know that the person doesn't know or speak English or Serbian, I try not to throw in words into my speech in that language, but sometimes I can't help it and they slip out. However, I also have specific moments when I do it fully consciously. This actually happened at a football match in Hungary, when the Serbs were playing against the Hungarians and I was cheering for Serbia, because I am proud of my origins. Vojvodina is different from Hungary, the mentality is completely different, it's more relaxed and I feel much more at home here." (Dániel)

The participants also tend to intentionally practice translanguaging to create and often to reinforce a sense of community and belonging, especially through inside jokes among family, friends, and colleagues, but also to express solidarity and emphasize a shared fate. In Levente's (Figure 22) and Leon's (Figure 23) examples, some Serbian expressions, such as ***ma mani me druže*** "leave me be, buddy" and ***kako da ne*** "yeah, right" are used by the participants humorously and sarcastically when reacting to their friend or colleague's messages.

Figure 22. Levente's messages with his friend about an appointment at his car repair shop.



Translation:

Person A
Hey neighbour!***
Are you open tomorrow?**
I'd bring in the car for you to change the tires.**

Person B
Leave me be, buddy ***
You're making me work even on a Sunday**

Person A
Come on*** [Serbian loanword] please.
It's the 21st on Monday, and they'll fine me if they catch me [with the summer tires]."**

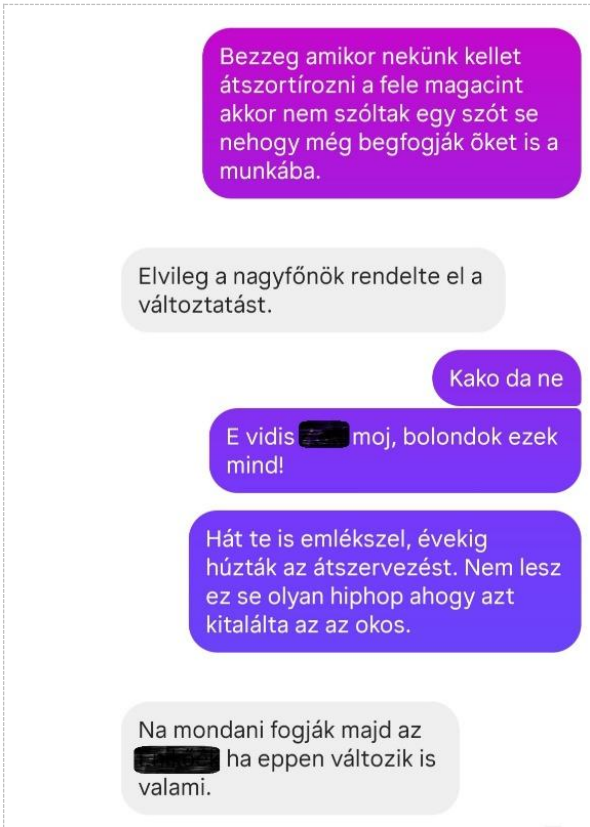
Person B
Alright, bring it in before 10 and I'll change them!**

Person A
I will, thank you, my friend!**

In both cases, translanguaging is used a tool for the expression of social ties and emotion, whereby the use of Serbian serves as a marker of their shared cultural and linguistic identities. Levente's friend (Person A in Figure 22) begins his message by addressing Levente as ***komšo*** (the shortened and informal version of ***komšija***) "neighbor" and Levente in turn calls his friend ***druže*** "buddy" in Serbian. Although they are both Hungarian and know each other's backgrounds, this is how they tend to express their familiarity and emphasize their shared cultural and multilingual identities.

Similarly to Luca's example previously discussed in 5.3.1, Leon's also includes an instance of practical translanguaging where he uses ***magacin*** "warehouse" instead of the Hungarian expression *raktár* out of habit, which he explained is due to them always having called the warehouse by the Serbian term at his former workplace. When contrasted with his other message ***kako da ne*** "yeah, right," the two instances of translanguaging point to different motivations and functions behind his language choices, which are sometimes strategic and intentional, while at other times they might be habitual.

Figure 23. Leon's messages with a former colleague discussing news about the firm they used to work at.



Translation:

Person A
Yet when we had to reorganize half of the** **warehouse***, they didn't dare say a word, because they'd get caught up in the work too.**

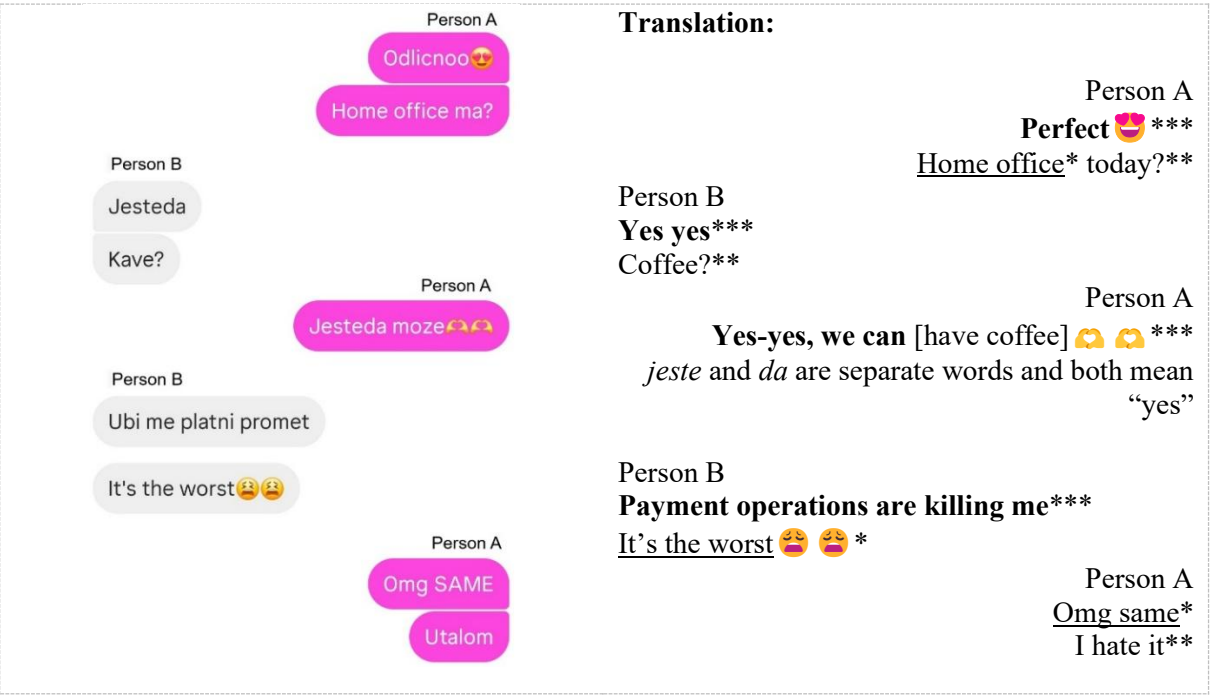
Person B
The big boss ordered the change supposedly.**

Person A
Yeah, right.***
You see my friend,* they're all crazy!**
You also remember how it took them years to do the reorganization. This won't be as quick and easy as they think.

Person B
Well, they [referring to other colleagues still working there] will say something if anything changes.**

The following example is Emina's messages with Jana during work hours. While their conversation is casual, they both practice translanguaging, weaving their spoken languages seamlessly yet meaningfully. Having grown up together, they spent a lot of time together both at school and outside of school as well. For them, using these three languages interchangeably and unrestrictedly with each other is closely tied to their long-lasting friendship. By practicing translanguaging, they are also showing affection, which is also often expressed with the use of emojis in their messages next to translanguaging, as they explained.

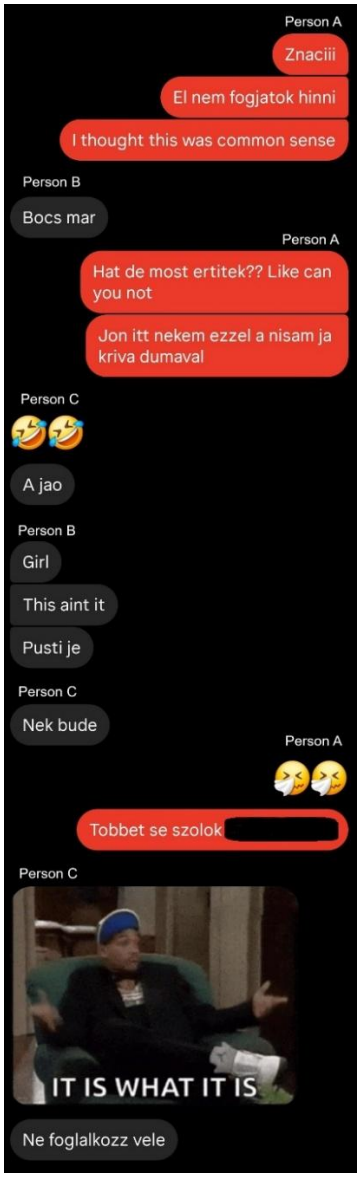
Figure 24. Emina's messages with Jana talking about making plans and work.



A slightly different perspective was shared by Dorina when she was talking about her private messages with her close friends in Figure 25, where translanguaging was described as a tool to dramatize one's messages and make the story livelier, entertaining, and more engaging on purpose. Before taking the screenshot, Dorina deleted some messages between her second and third message as she did not wish to share personal and sensitive details about the person they were talking about, which is the reason why the depicted conversation feels incomplete. While translanguaging does occur casually and effortlessly in Dorina's and her friends' messages, it does not take place randomly. As Dorina explained, there are certain phrases, such as "like can you not" and even the one in her friend's message "this ain't [isn't] it," which she mentioned she also uses a lot, which feel more natural and right for her to use in particular contexts like the one below instead of saying the same in Hungarian as it either does not give the same effect or the effect she wishes her message to carry. Similarly to Emina's and Jana's

experience discussed previously, Dorina also mentioned that translanguaging plays a pivotal role in managing her social relationships, and by its use, she is able to create a sense of closeness in her group of best friends. She uses the Serbian equivalent ***znači*** of "so" or "I mean" to begin telling her story in a dramatic way and to bring her friends' attention to the message, then shifts to Hungarian in the second message, tells the story (which we as readers cannot see in the screenshot due to privacy reasons) in Hungarian too, and lastly switches to English in her third message to emphasize her incredulousness even more.

Figure 25. Dorina's private messages with friends gossiping about an old classmate.



Translation:

Person A
So***
You won't believe it**
I thought this was common sense*

Person B
Well sorry**

Person A
But do you guys understand??** Like can you [referring to the old classmate] not*
She's over here with that **'it's not my fault'*****
speech**

Person C
🤣🤣
Oh man***

Person B
Girl*
This ain't it*
Leave her be***

Person C
Just let it be***

Person A
😤😤
I won't even speak to [old classmate] anymore**

Person C
An attached GIF with the writing: 'It is what it is'*
Don't even pay attention to her**

As she put it, she told the story in Hungarian because it was the easiest, however, the choice might also have been influenced by the monolingual Hungarian environment in which these events took place. Despite the three friends being in a monolingual Hungarian

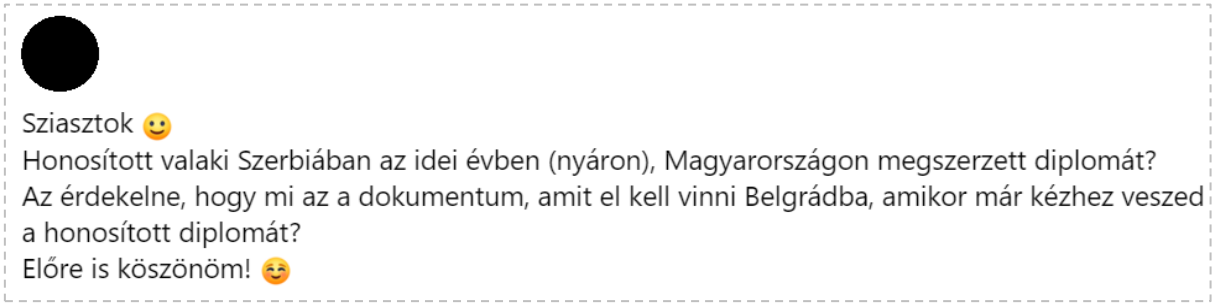
environment for an extended period of time during their studies, they still regularly use Serbian alongside Hungarian and English in their messages and often in their face-to-face interactions too. One of the reasons behind her using these above-mentioned English phrases could be due to her time spent online and the type of content as well as the language of the content she consumes:

(10) *"Szerintem sokkal érdekesebb és különlegesebb, ha valaki tud így több nyelvet keverni. Én például nagyon sokszor szándékosan keverek bele szerbet a mondókámba, amikor mondjuk olyan környezetben vagyok, ahol fel szeretném hívni mások figyelmét magamra vagy a származásomra, és igazából az angollal is így van. A neten, főleg TikTokon sokszor keverem az angolt a magyarral, de a szerbet is, mert amióta így van a TikTok, valamiért nagyon menő lett ez a Balkán és hát ki kell ezt a pozíciót élvezni. Na de azért persze nem mindig van ez így, ha komoly témáról van szó, akkor sokkal jobban odafigyelve posztolok vagy írok másoknak és ügyelek a nyelvre is."*

"I think it is much more interesting and special if a person knows how to mix multiple languages into their speech [instead of just speaking in one language]. Personally, I often tend to combine Serbian words into my speech intentionally, especially when I'm in an environment where I want to bring attention to myself or my origins, and honestly, it's the same with English too. On the internet, specifically on TikTok, I often mix English with Hungarian, but also Serbian because since TikTok became famous, for some reason the Balkans have become very cool and we have to enjoy and take advantage of this position/privilege. But of course, it's not always like that, if it's a serious topic I'm much more careful with what I write and in what language I am writing." (Dorina)

Seeing as she uses TikTok regularly and also talked about how she often uses memes in her conversations as reaction messages (like one of her friends did when she reacted to her story with a GIF that has the English phrase "it is what it is" on it), it also explains why she turns to English in moments like these. On the other hand, Dorina also emphasized that there are certain situations and topics where she has to pay careful attention to her writing and choice of words. Although Messenger messages are also written language, because they are usually rapid responses and resemble spoken language, it still makes them differ from public Facebook posts such as Dorina's in Figure 26.

Figure 26. Dorina's public Facebook post in a Vojvodina Hungarian Facebook group.



Translation:

Hello everyone! 😊 Has anyone accredited their degree that they obtained in Hungary this summer in Serbia? I am wondering which document I need to take with me to Belgrade when picking up my accredited degree. Thank you in advance! 😊

If we take a closer look at the text in Figure 26, we can see that she paid attention to carefully formulate her message in a much more formal way as opposed to her messages in Figure 25 above, but it is also noteworthy that it is an entirely monolingual post, where she highlighted that she also paid special attention to write the Hungarian name of Belgrade, *Belgrád*, as opposed to the Serbian ***Beograd*** which she usually tends to use when referring to the capital city even when speaking and writing Hungarian. Aside from Dániel (see Quote 9) and Dorina (see Quote 10), Dorottya also shared similar reasons why she intentionally chooses to engage in translanguaging, in some of her messages particularly, as well as in general online or offline:

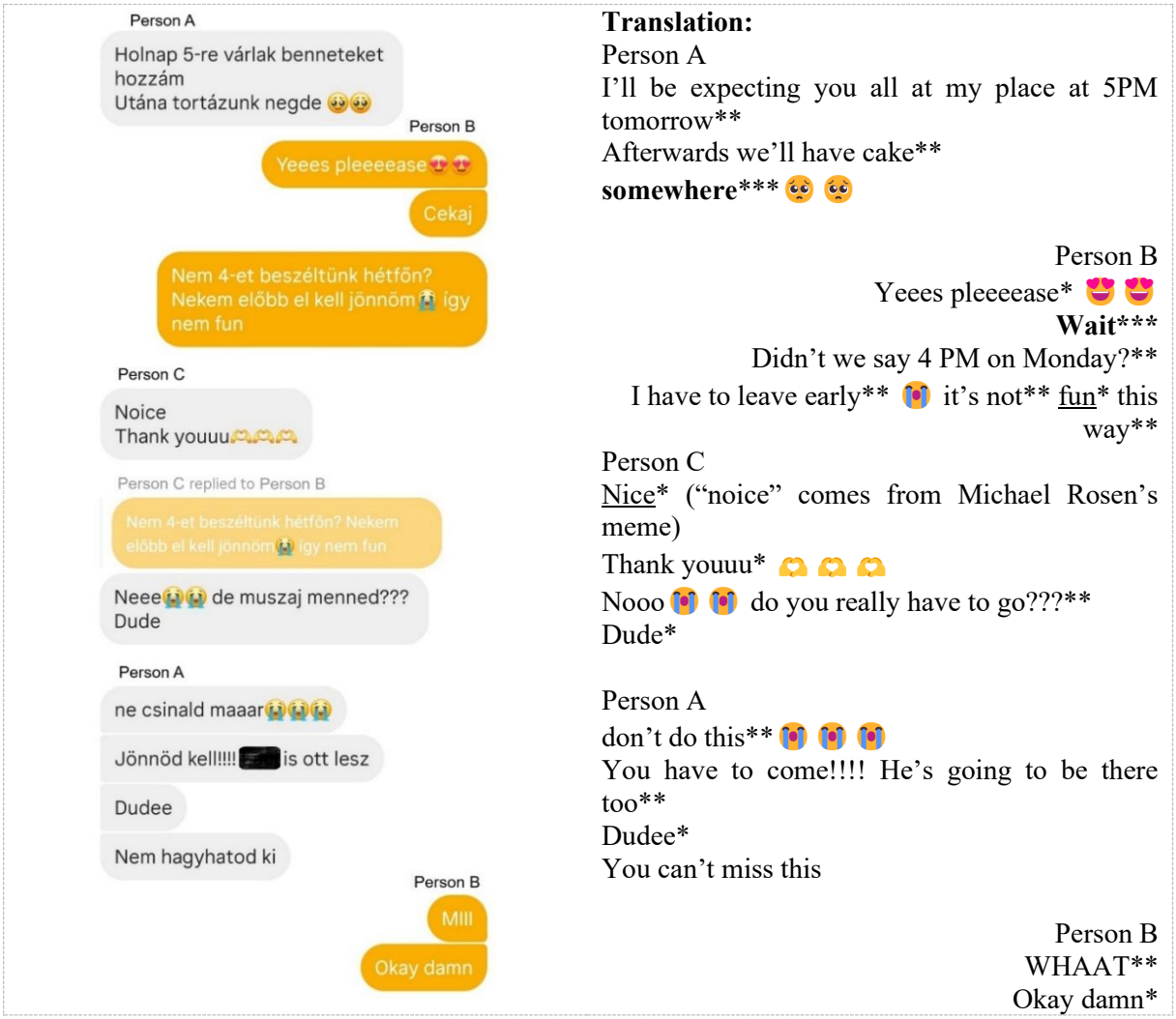
(11) *"Vajdasági barátnőimmel állandóan össze vissza beszélünk, de az a vicces, hogy full megértjük egymást, még akkor is ha magyarul, angolul és ráádaásul szerb szavakkal kombinálva irkálunk a group chatbe vagy beszélgetünk, facetimeolunk."*

"We constantly mix together multiple languages when talking with my Vojvodina Hungarian girl friends. The funniest thing is that we can easily understand one another even if our messages are a mix of Hungarian, English, and Serbian words in the group chat or when we Facetime each other." (Dorottya)

This can be seen in practice in her messages with her friends in Figure 27, in which Dorottya and her friends also engage in translanguaging seamlessly and intentionally just like Dorina and her friend group in Figure 25. Translanguaging is an important part of Dorottya's day-to-day life considering her multilingual background, and she often practices it to manage and maintain her social relationships like Dorina does. Some of the English phrases Dorottya wrote to her friends in Figure 27 (such as "yeees pleeeease 😍😍" and "okay damn") are of the same nature

as Dorina's above. She also revealed that it is a daily occurrence among her and her friends to send each other memes and entertaining posts on both Instagram and TikTok (her friend's message "noice" also originates from an older meme of Michael Rosen's), which eventually tend to make it into their group chat too if they come across them frequently enough or have found it funny and relatable. Although it depends on the situation as well as the seriousness of the topic, they often tend to reference viral memes, and especially certain phrases that they hear in viral TikTok videos and see in comments on social media (Dorottya mentioned the popular phrase they often use: "very demure, very mindful" to refer to someone being modest), when they wish to express a particular emotion or set the atmosphere of the conversation.

Figure 27. Dorottya's messages with two of her friends discussing a birthday meetup.



Translation:

Person A
I'll be expecting you all at my place at 5PM tomorrow**
Afterwards we'll have cake**
somewhere* 🥺 🥺

Person B
Yeees pleeeease* 😍 😍
Wait***
Didn't we say 4 PM on Monday?**
I have to leave early** 😭 it's not** fun* this way**

Person C
Nice* ("noice" comes from Michael Rosen's meme)
Thank youuu* 🫶 🫶 🫶
Nooo 😭 😭 do you really have to go???**
Dude*

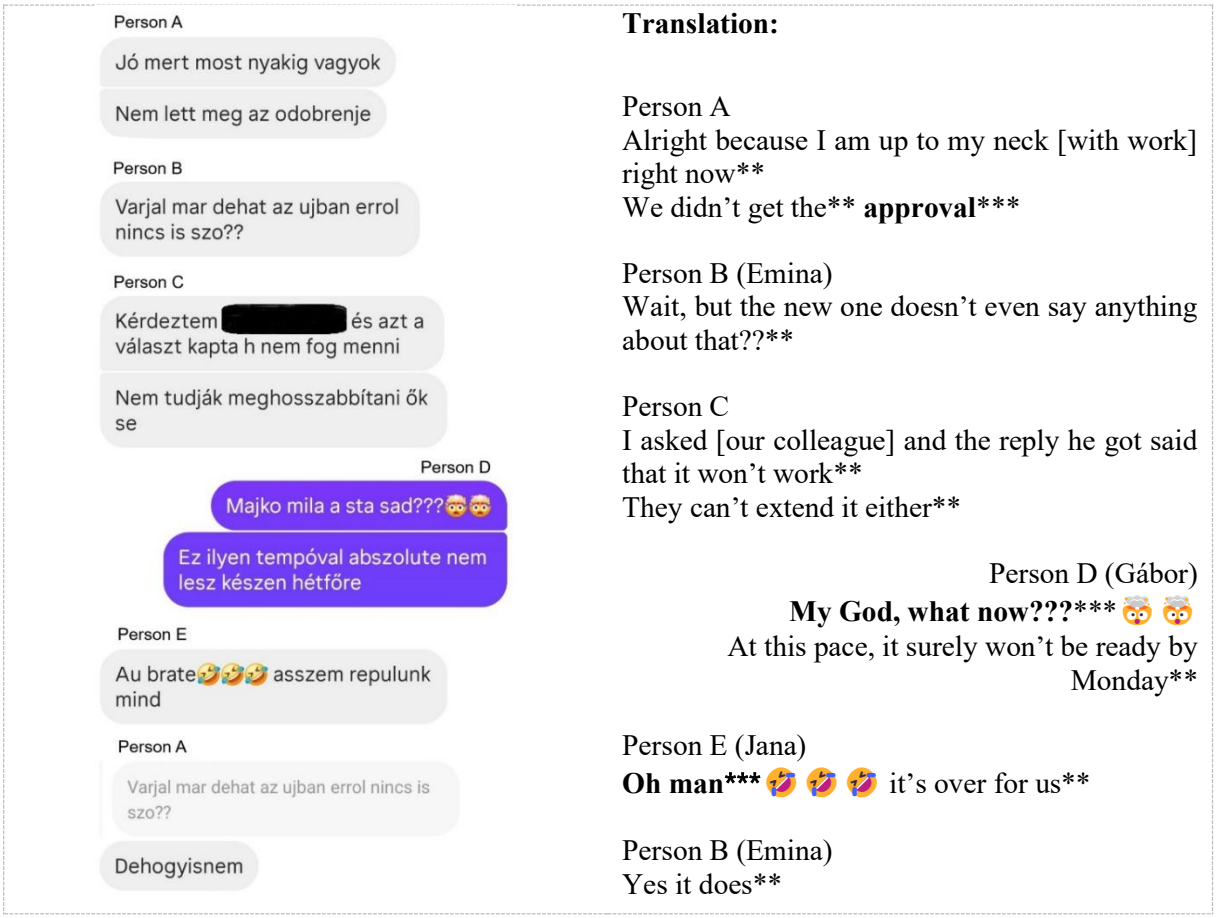
Person A
don't do this** 😭 😭 😭
You have to come!!!! He's going to be there too**
Dudee*
You can't miss this

Person B
WHAAT**
Okay damn*

In an earlier example, Dorina mentioned that she engages in translanguaging when she purposefully wants to bring others' attention to her cultural and national identity, her close ties to Serbia and the Balkan, and she especially pays attention to this when commenting under

videos on TikTok, where the audience is mixed. At the same time though, most of the participants expressed that they are aware and careful when it comes to translanguaging, as they do recognize how it is still considered by many as informal speech/text and tend to avoid it in more serious situations, especially when conversing with older individuals who might also be in power positions. However, Gábor, Jana, and Emina's experience (as well as the screenshot they shared from their group chat with their other colleagues) shows how translanguaging, both intentional and unintentional, can actually become an integral part of communication in formal settings such as the workplace without it being considered a tainted communicative practice.

Figure 28. Gábor's messages related to work with colleagues.



In Gábor's example, he can be seen conversing online with his colleagues talking about an issue they are facing at work as a team. Due to the sensitivity of the case, some details have been blurred. Based on the tone of the other messages sent by their colleagues (with the exception of Person D and E's messages), it is evident that the issue they are facing is not a small one, and it might even result in them getting in trouble for it (based on Person E's message). Despite the serious nature of the case, they engage in translanguaging both for practical purposes (using the Serbian equivalent ***odobrenje*** "approval" instead of the Hungarian *engedély* "permit") and

humor, regardless of the interlocutors' different status and age. Gábor uses the Serbian expression ***majko mila a šta sad?*** "My God, what now?" intentionally and humorously, which has become a phrase Jana, Emina, and Gábor now regularly use with each other in situations when they feel stuck at work. Following Gábor's message, Jana also attempts to lighten the situation with the Serbian phrase ***au brate*** "on man" building on Gábor's previous messages. From both of their perspectives, the translanguaging in their messages was intentional and strategic, although Gábor did mention that the phrase he used has become one he regularly uses in situations like this one. He explained that it was intended to provide some comedic relief and solidarity in a stressful situation at work, which in turn also has a community building and reinforcing function. As Gábor (12) explained, (*"Néha egyszerűen muszáj egy kicsit feldobni a hangulatot, mert ha nem akkor a végén még olyan rosszra is fordulhat a szituáció, hogy* ***nedaj Bože****** *[ne adj Isten] ... mindenki stresszes és semmire sem haladunk egy komplett csapat ideges emberrel. Bankban meg ráadásul, eleve bolodnokháza szokott lenni a kliensek nélkül is"*) "sometimes you just need to lighten a heavy situation because if you don't, it might actually take a turn for the worse – **God forbid** [said in Serbian in the original quote] – everyone is just stressed, and we won't get anywhere with a group of frustrated people. Especially in a bank, which is a nightmare of a place even without the clients," and for them, playing with language can be a savior in such distressing situations.

6. Overview of findings, limitations, and implications

In light of the findings discussed above, the present chapter offers a comprehensive discussion and overview by integrating the findings from both the qualitative and quantitative approaches and revisiting the hypotheses and research questions (in part based on Kostic 2025a, 2025b). The chapter then moves on to placing these findings within the broader academic context by comparing them to earlier studies, including the preliminary study.

6.1. Overview of findings

Research Question 1: To what extent do Vojvodina Hungarians exhibit characteristics of Digital Nativeness?

Overall, what the questionnaire results show is that those who engage in the most digital activities have the highest social media activity and the highest confidence in their own digital and internet skills (see section 5.1) among the Vojvodina Hungarians (i.e. those between the ages of 18–25, those under 18, and to some extent those between 25 and 35). These participants also have different language choices, and their translanguaging practices differ from those who are less digital oriented. The independent samples *t*-test has confirmed a statistically significant difference between the two groups, DN1 and DN0, which has demonstrated that the DN1 group was significantly younger, owned more digital devices, and reported much higher confidence in their internet and digital skills ($p < 0.001$). In addition to these results, the correlation analysis has shown a strong negative correlation between age and digital skills ($r = –0.673^{**}$, $p < 0.001$), which demonstrates that as age increases, digital skills and engagement decrease. Therefore, in the present dissertation there are essentially two age groups: those under 18 vs. those between 18 and 25, and, to some extent, a third group (those between 26 and 35), who exhibited the highest levels of digital engagement. Furthermore, the two oldest age groups (46–55 and over 55) have the least digital activity, the lowest averages on self-reported confidence in their digital and internet skills, and are the least likely to multitask despite being exposed to the internet and digital devices for the longest time. This outcome shows us that being around the internet and digital devices for over 20 years does not necessarily have to equate with high degrees of use, knowledge of, and engagement with digital technologies, which can often be due to a variety of factors such as access to devices, the nature of their occupation, but it can simply be a matter of personal interest (Hargittai 2010; Correa 2016; Jarrahi and Eshraghi 2019; Reid et al. 2023).

Similarly to the questionnaire results, the findings discussed in subsections 5.2.1–5.2.3 have also shown that the participants own and have constant access to digital devices, are all digitally connected with most spending up to 5–6 hours a day on the internet, and consider digital devices and the internet an integral part of their day-to-day lives today as opposed to 10–15 (and some even 20–25) years ago. An analysis of their life stories has further revealed that a very noticeable shift has gradually taken place regarding digital spaces and the internet's role in the lives of the participants up to the point of their interviews, and they are very much aware of these changes. Their techno-biographies have revealed that a major shift has taken place in their primary source(s) of information, where more traditional forms of media (mainly television, radio, and newspapers) and face-to-face communication have been replaced almost entirely by social media and digital communication to varying degrees even among older generations. This shift also represents how alongside local news and information, Vojvodina Hungarians now have much more access to global sources and information than they used to in the past, which also means that they are exposed to a much broader range of both linguistic as well as cultural topics and contexts. The available languages on the internet have also changed over time: while all of the participants' spoken languages are now available on the internet, in the initial stages of them using the internet, English was predominantly the language of the internet (Thomason 2001; Charkova 2007; Leppänen 2007; Seargeant et al. 2012; Coleman 2014). In these newer forms of media and communication, the interviewed Vojvodina Hungarians tend to be consumers instead of creators of new media, with the exception of younger individuals who are more regularly creating and sharing new content online. While nowadays access to digital devices and the internet can be seamless and unproblematic in financial terms too, participants have described this as once unimaginable and unreachable. While older participants have described frustrating situations where they were obligated to transition to a digital world (mainly Leon, Liza, Éva, Levente, Erika, and Luca), often due to changes that had been initiated within data handling at their workplace, younger individuals have talked about growing up in a digitized world excitedly and with ease. Multitasking has now become an integral part of the daily routines of younger and to some extent middle aged individuals too, while older individuals are still facing difficulties in this regard, even though their digital skills have improved over the years when compared to their knowledge and skills 15–20 years ago.

Revisiting the hypotheses formulated at the beginning of the data collection based on earlier studies as well as to some degree the findings of the preliminary study, it can be

concluded that the findings confirmed most of them. The results strongly support the initial assumption that younger Vojvodina Hungarians (under 18, 18–25, 26–35) would display the highest degrees of Digital Nativeness, especially when compared to the other established age groups (36–45, 46–55, and over 55). However, the assumption that age alone would not be the sole determining factor (Helsper and Eynon 2010; Hargittai 2010; Teo 2013; Correa 2016; Jarrahi and Eshraghi 2019; Reid et al. 2023) has also been confirmed, and the following intersecting factors can be named: age, socioeconomic factors (Tapscott 1998; Helsper and Eynon 2010; Nedeljković et al. 2016; Csiszárik-Kocsir 2024), higher exposure to digital devices and digital spaces (Helsper and Eynon 2010; Helsper 2021), personal interests and preferences, experience, and the nature and breadth of internet use (Helsper and Eynon 2010), confidence in one's own internet and digital skills, and tendency to multitask (Ransdell et al. 2011; Teo 2013). Furthermore, the results showed that these specific characteristics do vary in degree even within an age group, and they also showed that it is possible for older generations to exhibit some degree of these characteristics (Deák et al. 2024). What these findings also point to is that as times change, people's behaviors and relationships with technology also change. This could be one of the reasons why so many individuals who would be labelled Digital Immigrants 20 years ago, cannot entirely be labelled Digital Immigrants in the present dissertation, as they exhibit quite a few characteristics related to Digital Nativeness.

Research Question 2: In what ways do higher degrees of Digital Nativeness impact language choices and attitudes towards translanguaging among Vojvodina Hungarians?

When comparing the findings elaborated on in section 5.1 with the figures in 5.1.1 (Figures 24–26 and their respective Tables 24–26 in Appendix 5) that compile the results on the participants' language choices in a variety of settings, frequencies of language contact, and their answers to questions relating to translanguaging, it can be established that Digital Nativeness does seem to have an effect on the language practices and language choices of these three age groups (under 18, 18–25, and 26–35), but also on their openness towards translanguaging. Although not focusing specifically on Digital Nativeness, Nightingale (2016) did find that digital engagement among generations has a close connection with their positive attitudes towards minority and foreign languages in general due to higher exposure to languages in question. Similar findings can be observed in the present dissertation as well when comparing these younger age groups to the last two (46–55 and over 55), where the results show that Hungarian is the language the eldest of the participants encounter the most often, followed by

Serbian. The Pearson correlation analysis using the Digital Nativeness Scale (as main independent variable) revealed a strong positive correlation between higher degrees of Digital Nativeness and increased contact with (r = 0.456**, p < 0.001) and preference for English, along with self-perceived confidence in speaking English in person (r = 0.448**, p < 0.001), and openness to translanguaging (r = 0.242**, p < 0.001). Due to higher and more frequent exposure to digital media and a more diverse range of social media platforms, younger individuals also said they encounter much more English language media aside from Hungarian and Serbian, which could be behind their higher tolerance towards language mixing and their higher averages regarding the question on translanguaging where they had to compare their own linguistic practices to the example provided by the 21-year-old university student in the questionnaire (Appendix 3, Question 27). Additionally, their high confidence in their digital skills in combination with the diverse range of platforms they regularly visit could also be behind their higher engagement with translanguaging, and the overall flexibility of their linguistic practices, as opposed to the older generations whose results indicate that they do not entirely favor translanguaging. At the same time, higher Digital Nativeness Scores have shown a moderate negative correlation with Hungarian language contact on social media (r = –0.300**, p < 0.001) indicating that the higher one's Digital Nativeness Score is, the less likely they are to come across Hungarian on social media, especially when compared to English. These results have also demonstrated that those with higher degrees of Digital Nativeness are significantly less bothered by someone else' translanguaging, both when they know the language(s) used (r = –0.095*, p < 0.05) and when they do not (r = –0.240**, p < 0.001), indicating a higher tolerance towards linguistic fluidity. Although English plays a dominant role in the lives of these individuals, this does not seem to interfere with the use of Hungarian and their desire to choose Hungarian in a variety of settings consciously. Taking all of the findings into consideration, the overall results have shown that Hungarian is still the primary choice of language for the majority of the 615 participants, which is especially important in minority settings such as Vojvodina. As mentioned in Chapter 2, previous studies have revealed rather positive outcomes of the promotion of translanguaging among minority communities (Cenoz and Gorter 2017; Prošić-Santovac and Radović 2018; Ćorković 2019), which could aid in language maintenance. However, as Cenoz and Gorter (2017: 910) highlighted, this can only be fruitful if translanguaging is happening in contexts that are authentic to the reality of the minority. This way, the encouragement of translanguaging would ideally lead to the speakers realizing that there is a multitude of situations where their own language variety is needed to function and communicate and cannot be left behind.

In light of the above, the second set of hypotheses relating to the impact of Digital Nativeness on language choices and attitudes towards translanguaging has also been confirmed. Similarly to the findings of the preliminary study, the final results also showed that younger generations (under 18, 18–25, and to some extent 26–35) are generally more digital-oriented and digitally active in their day-to-day lives when compared to the 46–55 and over 55 age groups. In a variety of online contexts, English has been found to be much more favored by the younger age groups as opposed to older generations (see Figure 16) who prefer Hungarian in nearly all of the cases. However, Hungarian is still very often the primary choice of language for all generations in most settings, and overall, translanguaging is generally accepted by the participants. The findings also indicate a connection between higher degrees of Digital Nativeness and one's openness towards translanguaging, as was found by Nightingale and Safont (2019) too.

Research Question 3: For what purpose and how do Vojvodina Hungarians use their languages in digital spaces?

The data collected via interviews also supports the findings discussed so far. In a variety of online and offline contexts, the 15 Vojvodina Hungarians' language choices tend to lean towards Hungarian in most cases, and sometimes Serbian, however, younger individuals are more likely to choose English (or sometimes all three languages) on the internet and are also more open to the idea of translanguaging in contexts that they themselves consider to be appropriate, both digitally and in face-to-face situations as opposed to older generations. The 16 screenshots shared by the Vojvodina Hungarian participants have taken these results further and revealed that they tend to engage in translanguaging for a variety of practical and intentional reasons, as they themselves rationalize. In general, younger individuals frequently blend the three languages – Hungarian, English, and Serbian, or Hungarian and English, or Hungarian and Serbian – while older individuals most frequently blend Hungarian and Serbian instead of English based on their translanguaging examples and the answers they gave when asked about their linguistic practices in general. In some of the cases, translanguaging has been described to occur as either an unconscious habit or a practical linguistic practice driven by urgency and most frequently convenience. This could be seen in Dorottya's and Jana's examples where they instinctively turned to English and Serbian when they needed to express strong and difficult emotions to those close to them: as a sort of coping strategy. While the participants explained various cases of translanguaging as a result of habit, a deeper analysis showed that participants

tend to rationalize these instances as "accidents" or "unconscious habits" to justify why they do not adhere to a single named language in communication. For example, Dorottya and Jana claim that they use English and Serbian in stressful situations impulsively or unintentionally, however, these instances also reflect strategic linguistic practices, where Dorottya is actually creating a digital 'safe haven' for herself and Jana is renegotiating her position and professional credibility in front of her colleague and friend. At other times, participants explained their translanguaging occurred due to its convenience in time-sensitive situations (Dániel's first example), or out of habit when participants were referring to specific terms related to the workplace or address terms within the family (Emina's, Luca's, Endre's, and Levente's examples). Along the lines of Gal and Irvine's (2019) work, these practices and the participants' rationalizations in their quotes can be interpreted through the semiotic processes of iconization, fractal recursivity, and erasure. In many cases discussed above in 5.2 and 5.3, the participants negotiate the tension between their actual multilingual practices and the social expectations of monolingualism through justifying their language choices and translanguaging. Sometimes these justifications simplify and downplay their agency and the complexity of the situation. By dismissing these instances of translanguaging as accidents or habits, they are both protecting their social position and avoiding appearing like they are intentionally challenging the ideological ideal of the "pure" monolingual speaker. Some of these instances also illustrate iconization, where participants directly link specific qualities to linguistic practices, as well as fractal recursivity, where they, for example, project the region's multilingual reality onto their own private familial circles and interactions, where each named language has a specific function.

However, there were also various cases where they confidently and explicitly stated that they engaged in translanguaging intentionally, as these instances were thought through strategic ways of 'languaging' (Jørgensen 2008; Pennycook 2010) intended to carry much deeper meaning behind them than, for example, those instances of translanguaging in 5.3.1. As expected, based on Nightingale and Safont's (2019) findings, the analyzed online interactions shared by the Vojvodina Hungarians have indicated that language choices and translanguaging practices are not occurring randomly but are oftentimes intentional and goal-driven, and, notably, this is characteristic of all the interviewed Vojvodina Hungarians' translanguaging practices regardless of their age. Most often, these messages including intentional translanguaging were meant to build, signal, or reinforce a sense of shared cultural and linguistic identity with fellow Vojvodina Hungarians, coworkers, or friends and family, which

is in line with the findings of previous studies (Paricio-Martín and Martínez-Cortés 2010; Cunliffe 2019). To convey these underlying messages, participants most often realized it through the use of inside jokes. Younger Vojvodina Hungarians, like Dorina and her friends, referenced specific English phrases from memes and TikTok culture also with the goal to create a sense of closeness and shared interests within their friend group. Translanguaging is thus a valuable tool for these participants not only in managing their social relations, creating and strengthening bonds through the expression of solidarity, and expressing their membership in specific groups, but in some instances also easing tension in professional and formal contexts such as in Gábor's example.

Some of the participants also have expressed that they feel a sense of pride when they get to express their Vojvodina Hungarian identities through language, and they often do so with the use of Hungarian and Serbian interchangeably, even in contexts where their entire audience might not understand what they are saying. Translanguaging has been described as an integral part of the Vojvodina Hungarians' digital and face-to-face communication, sometimes as a habitual practice, and other times as an intentional and goal-driven communicative practice. Although older generations have also mentioned they tend to engage in translanguaging at times (both out of habit and intentionally), they seem to be more reserved and less likely to practice it in formal and serious situations as opposed to younger individuals, such as Emina's group, who even experience translanguaging as an integral part of their workplace communication, which is in line with Räisänen's findings (2018). It also needs to be emphasized that not all Vojvodina Hungarians share the same views on the practice of and acceptance towards translanguaging. As we could see in Dániel's example (Figure 21) and Emina's experience with translanguaging at home in front of her grandmother, translanguaging is still often stigmatized and considered to be a tainted linguistic practice that many do not consider appropriate in professional and formal settings, as was also found in other studies (Canagarajah 2017; Aleksić and García 2022).

Research Question 4: What factors influence the linguistic practices of Vojvodina Hungarians in digital spaces, particularly in terms of language choices and translanguaging?

Based on earlier studies dealing with language choice in digital spaces, the topic of discussion or the language(s) appearing on the given platform (Li 2011; Androutsopoulos 2015; Aleksić and García 2022) were among some of the most expected factors influencing language

practices. Already in the preliminary study, we could see that context (e.g., the topic or language of content one sees on a website) and function (e.g., communicative goal, intended (underlying) message) would probably be some of the most common influential factors in digital communication in the Vojvodina Hungarian context, while personal (linguistic and cultural) background and one's self-perceived competence in their spoken language(s) might not be as influential. These assumptions have been largely confirmed, as the results of both the final questionnaire and the interviews pointed out that most often their language choices are influenced by the language they see comments, messages, or online content in, aside from the type or topic of the content. A very notable finding is that while a few of the participants have expressed their low confidence in some of their spoken languages (mainly Serbian and English), their insecurities did not prevent them from using those languages in written form online. Their bravery in some instances might be the result of a figurative protective shield that digital spaces seem to offer them. This sense of security can inspire them to use their languages more freely online than they would in person. In some of the translanguaging examples, we could see that intentional translanguaging does occur in the Vojvodina Hungarian context when the speaker's (or writer's) goal is to address a specific audience or exclude another, or when they wish to conform to worldwide trends and use the lingua franca (Durham 2007; Lee 2014), which is most likely to take place among younger individuals. Participants have also shown that they are consciously and intentionally switching between languages or deciding to reply in another language than that of the content, with the aim to express their linguistic, national, and cultural identities (in line with findings in Kelly-Holmes 2004; Lee 2014; Molyneaux et al. 2014; Androutsopoulos 2015; Lee 2016; Belmar and Glass 2019).

6.2. Implications and limitations

Overall, the anecdotes and examples discussed in the previous chapter all indicate that the participants' language choices and desire to engage in translanguaging are very often influenced by a multitude of intersecting factors. While their linguistic practices are often deeply rooted in and influenced by their 'memberships' in specific communities or online groups (see also Lee 2014; Androutsopoulos 2015), the findings have also pointed out the complexity of these instances. The type of consumed content and content created, and even their own beliefs about their spoken languages as well as their confidence in those are all additional building blocks of one's online identity (see also Lee 2014, 2016) which are carefully and intentionally curated, whether online or in face-to-face situations. Similarly to previous

studies researching translanguaging and exploring the ways in which its promotion could yield positive effects especially in minority settings (Cenoz and Gorter 2017, 2019), the participants in the present study have expressed that translanguaging is something very unique to them, as they are able to understand one another on a deeper level and discuss topics that necessitate the use of all of their spoken languages for mutual understanding and effective communication. The necessity for translanguaging in such instances is something that strengthens their membership in the Vojvodina Hungarian community, where the fact that they share the same languages, a mixture of cultures, and lived experience with fellow Vojvodina Hungarians is something that is to be valued and cherished. This provides great grounds for a supportive community, where the use of their Hungarian minority language (whether by translanguaging or not on its own) becomes a necessity, especially for discussing various topics that might not be possible without the use of Vojvodina Hungarian. Considering that Hungarian is their first language and the language they have the richest repertoire of, it is possible that group communication would not take place as effectively if this crucial condition was not met (Cenoz and Gorter 2017, 2019).

The present dissertation has a number of implications, particularly for minority language communities. As we could see, the findings have shown that translanguaging can and does have positive effects in minority settings, as it provides a flexible, creative, and effective way of communication. The study also aims to challenge traditional views of language mixing that have long been stigmatized, through the analysis of real examples of translanguaging among Vojvodina Hungarians. The linguistic examples not only demonstrate how individuals can communicate effectively by practicing translanguaging, but also demonstrate how multilingual speakers are able to creatively express themselves, convey their messages, and perform their identities in complex ways. Extending the findings of previous studies (cf. Cenoz and Gorter 2017, 2019), the examples and experiences related to linguistic and digital practices shared by the Vojvodina Hungarian participants in the present dissertation further strengthen the idea that translanguaging and higher degrees of Digital Nativeness can positively impact digital communication, digital presence, and aid the process of language maintenance. Although the results clearly show how prominent the position of English is in the younger and, to some extent, the middle-aged Vojvodina Hungarians' lives in various digital and physical spaces, Hungarian is nevertheless their primary choice, which could also be seen in their private and personal digital communication, highlighting their desire and need for the maintenance of Hungarian even in the face of the widely spoken and encountered Serbian state language and

the globally preferred English language. While it is not a guaranteed positive and discrimination-free environment, digital spaces can nevertheless offer a supportive, multimodal, and creative space for minority languages and speakers, who might also see it a necessity, as we could see in the preliminary study's results, especially in cases where a sense of community and security is absent in person.

The findings might also be useful for purposes relating to education and language policy (Williams 1994, 1996; Baker 2001), as the study has demonstrated how young people effortlessly engage in translanguaging and view it as an integral part of their daily communicative practices. Instead of further supporting and applying monolingual norms in multilingual environments and viewing language mixing as a deficiency, it would be much more beneficial to embrace translanguaging and recognize it as a valuable communicative resource.

While the present study does fill a major gap in the study of digital linguistic practices within minority Hungarian communities by offering valuable and novel insight into the linguistic and digital practices of Vojvodina Hungarians in today's digital age, it is essential to acknowledge some of the constraints and limitations that were faced during the process of data collection and analysis. To begin with, although the preliminary study was not intended to provide generalizable insights on Vojvodina Hungarian linguistic and digital habits, one of its major limitations is nevertheless its small sample size. Another issue that was identified at that point in the research was that the initial focal points of the preliminary study were too broad, which also made the preliminary questionnaire longer and overly broad. However, this process was very necessary and highlighted some key aspects that needed to be modified in order to reach the final product and make the dissertation much more focused and goal driven.

Concerning the qualitative data collection, there are also some noteworthy limitations and insights that need to be addressed. First, only 15 individuals decided to give additional interviews out of the original 21 Vojvodina Hungarians who signed up. Gaining insight from those additional 6 participants who did not necessarily favor translanguaging would have greatly enriched the study's findings and broadened its scope. Those who were interviewed shared more or less similar attitudes towards translanguaging and were rather supportive of multilingualism as well, however, I cannot be completely certain that their shared opinions reflect their reality entirely, seeing as they were aware of being interviewed, which might have influenced their answers. The insights and life stories shared by the interviewees are also most

certainly not generalizable to the entirety of the Vojvodina Hungarian community, partly due to their individual and personal experiences (despite the many mentioned overlaps), and also because of the small sample size.

Lastly, to gain more precise insight into Digital Nativeness, another methodological improvement for future research could be to avoid the use of pre-set age groups and instead allow participants to enter their age on their own, as it might yield more insightful results on Digital Nativeness. While it does offer some order within the data and eases the process of categorization, it can be restricting at times and skew the final results.

7. Conclusion

The present dissertation has sought to explore the extent of Digital Nativeness among 615 Vojvodina Hungarians with an adapted version of the Digital Nativeness Test developed by Helsper and Eynon (2010). Simultaneously, it has also aimed to see whether Digital Nativeness influenced the participants' language choices and general attitudes towards translanguaging and three languages in general, those of Hungarian, Serbian, and English, which are usually present in the Vojvodina Hungarian setting both online and in face-to-face situations. The overall results have revealed that in general, there are visible differences in digital activities and confidence in internet and digital skills among the six established age groups (under 18, 18–25, 26–35, 36–45, 46–55, over 55), also showing an effect on the participants' openness towards multilingual language practices. Despite the large number of participants in the present study, the above results cannot be generalized for the entirety of Vojvodina Hungarians due to the dataset being a quota-based sample based on age and gender. However, more importantly, the other reason why the findings cannot be safely generalized is due to the nature of digital and linguistic experiences, which tend to be very individual and can often be closely tied to personal interests, which in turn also influences these outcomes both in terms of technology and linguistic practices, as was also highlighted in previous studies (Hargittai 2010; Helsper and Eynon 2010; Lee 2014; Helsper 2021).

As an extension of the quantitative data, the present dissertation has also looked at 15 Vojvodina Hungarians' digital habits and digital linguistic practices, specifically focusing on presenting and analyzing authentic instances of their digital translanguaging from a qualitative perspective. To explore the topic further, semi-structured interviews were conducted with some of the same participants from the preliminary study, and the findings have shown that the Vojvodina Hungarian interviewees had very individual yet overlapping life stories in relation to technology (Lee 2014) as well as linguistic choices and linguistic habits in general. Although these findings are not generalizable either due to the limited number of participants and the individuality of their experiences, the qualitative approach has nevertheless allowed for more detailed and individualized data collection and analysis. Similarly to the questionnaire's results, the interview data have also revealed a high level of digital integration in the daily lives of the Vojvodina Hungarian participants, with substantial time spent online and a diverse range of online activities, which include social media use, information seeking, communication, and online errands of all sorts. The findings also highlight the crucial role of digital platforms in maintaining social connections within the Vojvodina Hungarian community that also foster and

provide multimodal platforms for translanguaging practices that range from intentional, strategic 'languaging' to those described by the Vojvodina Hungarian participants as habits or practical choices to avoid the pressure of ideologically driven societal expectations of adhering to a single named language. In this sense, Digital Nativeness is not solely about possessing higher degrees of digital skills or being connected, but also about the agency that these skills and experiences are able to provide the internet user. In these spaces, participants are able to create 'safe havens' or turn to specific audiences where they can feel empowered to communicate with others relying on their entire linguistic repertoire. Based on the Vojvodina Hungarian participants' own examples and experiences, digital spaces minimize a variety of risks related to fluid linguistic practices that often cannot be avoided in face-to-face interactions in the physical world.

The internet also serves as a primary source of information when it comes to news, culture, and information relevant to their community. Furthermore, the findings emphasize the multilingual nature of their communication, with frequent intentional as well as unintentional translanguaging between the languages of Hungarian, Serbian, and English. Their spoken and written interactions are characteristic of multilingual speech, where translanguaging plays a significant role in shaping their online identities and often takes place for the purpose of more efficient communication and getting one's message across in the easiest and most effective way possible. While their language choices are influenced by a combination of contextual, social, and personal factors, in line with results of previous studies on related topics (Lee 2014; Androutsopoulos 2015), the maintenance of Hungarian in both digital and face-to-face contexts is not hindered, but is actually facilitated by digital presence and their willingness to engage in digital communication and engage with digital content in Hungarian.

The findings of the present dissertation on digital and linguistic practices of Vojvodina Hungarians point to several potential directions for future research. First, seeing as frequent use and contact with digital devices and the internet and exposure to multiple languages online (but English especially) had strong connections with higher degrees of acceptance of and openness towards translanguaging practices, future research could take this a step further and explore attitudes towards translanguaging. Researchers could employ indirect methods such as the matched-guise technique (Lambert et al. 1960) or the verbal-guise technique (Gallois and Callan 1981) alongside a semantic differential scale (Osgood et al. 1957) that measures solidarity and status traits to see more precisely how participants truly judge speakers who engage in translanguaging as opposed to those who do not. Studies of this kind could also be

comparative in nature and could be done in multiple ways. For one, attitudinal studies could be done across multiple minority Hungarian communities at the same time in Romania, Slovakia, Croatia, Ukraine, Serbia, and Austria (similarly to an earlier project by Fenyvesi 2005) to see how the degree and type of digital exposure, language practices, and attitudes vary and interact with each other in various contexts. Alternatively, they can also be done across different language groups in the same region, for example, by comparing attitudes of Slovakia Hungarians and the majority Slovak speakers to explore how attitudes towards translanguaging vary.

Second, a more thorough examination of active digital presence could also be done in minority Hungarian (and essentially any indigenous, migrant, and minority language) contexts, specifically focusing on multimodal digital communication and translanguaging instances on social media platforms, such as Reddit, TikTok, and Facebook among others. Studies could investigate how technical affordances of digital technology are creatively and strategically used (similarly to the 2011 study by Vaisman) to perform identities and convey messages with various overlapping and underlying meanings and purposes. Furthermore, future research could also investigate the linguistic landscape of the multilingual Vojvodina, which remains substantially under-researched (with the exception of Sikimić and Nomachi 2016; Sorescu-Marinković and Salamurović 2022). Studies in this field not only tend to document the visible presence of languages (e.g., public signs, advertisements, tombstones, etc.) but also examine how linguistic practices reflect the local power dynamics, language status, and linguistic rights of various communities (Sorescu-Marinković and Salamurović 2022).

Finally, coming back to the roots and original purposes of translanguaging (Williams 1996; Baker 2001), future research could also explore the pedagogical implications of these practices, especially in authentic contexts (which are often bi- and multilingual) such as Vojvodina, where these tend to occur regularly (see also Cenoz and Gorter 2017, 2019). Most importantly, research in this regard should not only focus on the theoretical understanding of using translanguaging as a tool in education, but also on the practical implementations of it. Very often, classroom environments lack authenticity, which can discourage learners and negatively impact their motivation. This is also the reason why Cenoz and Gorter (2017: 910) continuously emphasize the need to establish authentic contexts in the classroom where translanguaging is strategically used and encouraged, contexts that are "rooted in the reality of minority languages and [allow] for breathing spaces that create the need to use these languages." Longitudinal studies could also be designed to track and see what the long-term

impact of encouraging translanguaging has on active participation, attitudes, and even motivation.

8. References

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Appendix 1: Questionnaire used in the preliminary study

A. Background information (1–10)

Circle the answer(s) that best apply to you! The questions that have been starred (*) are cases where multiple answers can be given or circled.

1. Gender: Male, Female, I do not wish to answer, Other: _____

2. Age: under 18, 18–25, 26–35, 36–45, 46–55, over 55

3. Place of birth (settlement): _____

4. Current place of residence (settlement): _____

5. Highest level of education: I did not go to school, Elementary school, Secondary school (gymnasium, vocational school), Associate degree, College – university (bachelor's degree), Postgraduate education (Master's, Doctorate)

6. How can you best describe your current situation in terms of work? I work outside my home – I go to work, I work from home (e.g. homemaker, teleworking), I am retired, I am looking for a job – I am unemployed, I am a student, Other: _____

7. If you are working, circle your area: I am unemployed, Education, Administration, Agriculture, Industry, Health, Other: _____

8. Nationality: Hungarian, Serbian, I do not wish to answer, Other: _____

9. Have you stayed in another country for at least 6 months? Yes, No

10. If you have stayed in another country for at least 6 months, which country was it and what was the purpose of travel? _____

B. Language Knowledge and History (11–28)

If any of the questions below do not apply to you (for example, if you never have contact with relatives or grandparents, or if they are no longer alive or you do not speak a particular language), circle "This question does not apply to me."

11. Which language(s) do you consider to be your first language (the language(s) you first learnt)?* Hungarian, Serbian, Other: _____

12. If you are bi- or multilingual, which one would you say is your first language? This question does not apply to me, Hungarian, Serbian, Other: _____

13. How did you learn the following languages?* (You can mark multiple replies per line.)**

Table 4. Preliminary study: results to Question 13.

	Hungarian	**Serbian**	**English**
At home from the family	63	21	2
From friends, neighbors or colleagues	36	29	15
At school or at language classes	2	42	43
From the internet	2	3	40
I do not speak the language / I never learnt it	–	5	4
	34%	32%	34%

14. If applicable to you, what language(s) did your family and closest friends usually use with you in the past and now? * (You can mark multiple replies per line.)

	Hungarian	**Serbian**	**English**	**This question does not apply to me**
As a child, your grandparents spoke with you				
As a child, your mother spoke with you				
As a child, your father spoke with you				
As a child, your siblings spoke with you				
As a child, your closest friends spoke with you				
Currently, your grandparents speak with you				
Currently, your mother speaks with you				
Currently, your father speaks with you				

Currently, your siblings speak with you				
Currently, your closest friends speak with you				

15. What language (did) your parents use among themselves?* (Multiple answers can be marked.) This question does not apply to me, Hungarian, Serbian, Other: _____

16. What language(s) do(es) your children speak?* (Multiple answers can be marked.) This question does not apply to me, Hungarian, Serbian, English, Other: _____

17. Have you ever experienced someone else trying to prevent your parents from using certain languages with you? If so, which language(s)?* (Multiple answers can be marked.) Hungarian, Serbian, English, Other: _____

18. Have you ever had your parents encouraged by someone else to use certain languages with you? If so, which language(s)?* (Multiple answers can be marked.) Hungarian, Serbian, English, Other: _____

18b. Do you try to encourage your child(ren) to (learn and) use the following languages?* (Circle the one(s) you do/would encourage them to use and learn.)

Table 5. Preliminary study: results to Question 18b.

	Hungarian	**Serbian**	**English**
Yes I encourage my child(ren) to learn and speak	40%	27%	27%
No, I do not encourage my child(ren) to learn and speak	18%	–	2%
I am not a parent, but I would encourage my future child(ren) to learn and speak	40%	70%	68%
I am not a parent, but I would not encourage my future child(ren) to learn and speak	2%	3%	3%

19. How would you rate your own language skills in Hungarian?

Table 6. Preliminary study: results to Question 19.

	Perfectly (without any difficulties)	Well	Well enough	Poorly	Not at all
I speak Hungarian	87%	13%	–	–	–
I understand Hungarian	93%	5%	2%	–	–
I write in Hungarian	85%	10%	5%	–	–
I read in Hungarian	95%	3%	2%	–	–

20. How would you rate your own language skills in Serbian?

Table 7. Preliminary study: results to Question 20.

	Perfectly (without any difficulties)	Well	Well enough	Poorly	Not at all
I speak Serbian	21%	26%	25%	25%	3%
I understand Serbian	25%	39%	26%	8%	2%
I write in Serbian	25%	36%	20%	19%	–
I read in Serbian	33%	38%	20%	6%	3%

21. How would you rate your own language skills in English?

Table 8. Preliminary study: results to Question 21.

	Perfectly (without any difficulties)	Well	Well enough	Poorly	Not at all
I speak English	30%	30%	20%	13%	7%
I understand English	35%	30%	20%	8%	7%
I write in English	32%	27%	20%	15%	7%

I read in English	42%	23%	20%	8%	7%

22. If you speak more than one language, do you mix your spoken languages when talking to other Vojvodina Hungarians? (For example: You are talking with a Hungarian acquaintance in Hungarian and you are switching the language of conversation from Hungarian to Serbian back and forth. Language alternation can apply to words alone or to entire sentences.) Yes, No

23. Does it bother you if your interlocutor switches to (an)other language(s) during your conversations? (Circle 1 answer from A and 1 answer from B) A) If I speak that other language, it does not bother me, If I speak that other language, it does bother me; B) If I do not speak that other language, it does not bother me, If I do not speak that other language, it does bother me

24. How bravely/boldly do you use the following languages live and online?

Table 9. Preliminary study: results to Question 24.

	Bravely	**Not so bravely**	**Do not use it on purpose**	**I do not speak it at all there**
I use the Hungarian language in face-to-face situations	92%	8%	–	–
I use the Serbian language in face-to-face situations	46%	37%	5%	13%
I use the English language in face-to-face situations	52%	33%	6%	8%
I use the Hungarian language online	95%	–	5%	–
I use the Serbian language online	44%	33%	6%	16%
I use the English language online	68%	24%	2%	6%

25. Do you speak any other foreign language(s)? Yes, no

26. If you answered yes to the previous question, which language(s) is it/are they and how would you rate your own language skills?

Language x: _____: Beginner / Intermediate / Advanced / Native speaker

27. Which one of the following languages do you use most online? (Mark only one.) Hungarian, Serbian, English, Other: _____

28. Which one of the following languages do you use most in face-to-face conversations? (Mark only one.) Hungarian, Serbian, English, Other: _____

C. Language Use (29–38)

If any of the questions below do not apply to you (for example, if you never have contact with relatives or grandparents, or if they are no longer alive or you do not speak a particular language), circle "This question does not apply to me."

29. Do you use Hungarian in the following situations and how often?

Table 10. Preliminary study: results to Question 29.

	I always use Hungarian	I regularly use Hungarian	I sometimes use Hungarian	I rarely Hungarian	I never use Hungarian
On the internet	52%	32%	12%	2%	2%
At home	90%	7%	3%	0%	0%
With relatives	82%	18%	0%	0%	0%
At work/school	69%	15%	11%	3%	2%
With friends	78%	16%	4%	0%	2%
With neighbors	55%	25%	12%	3%	5%
At stores	31%	25%	22%	15%	7%
On the street	38%	46%	8%	8%	0%
At libraries	40%	18%	22%	7%	13%
At church	59%	18%	5%	7%	11%
At other religious events	41%	20%	11%	8%	20%
With authorities	20%	18%	18%	28%	16%
At community events (e.g.,	43%	25%	20%	10%	2%

cultural events, festivals, etc.)					
For the expression of deeper emotions	70%	20%	8%	0%	2%
For profanity	61%	16%	11%	7%	5%
total	55%	21%	11%	7%	6%

30. Do you use Serbian in the following situations and how often?

Table 11. Preliminary study: results to Question 30.

	I always use Serbian	**I regularly use Serbian**	**I sometimes use Serbian**	**I rarely Serbian**	**I never use Serbian**
On the internet	2%	24%	32%	24%	18%
At home	8%	13%	22%	19%	38%
With relatives	2%	16%	22%	21%	33%
At work/school	5%	27%	24%	22%	17%
With friends	0%	29%	18%	38%	15%
With neighbors	5%	36%	23%	23%	10%
At stores	17%	55%	13%	9%	6%
On the street	5%	41%	26%	15%	13%
At libraries	9%	24%	21%	16%	30%
At church	0%	10%	16%	21%	53%
At other religious events	0%	11%	21%	16%	53%
With authorities	31%	33%	17%	16%	3%
At community events (e.g., cultural events, festivals, etc.)	7%	33%	16%	29%	15%

For the expression of deeper emotions	2%	20%	8%	16%	44%
For profanity	6%	25%	30%	22%	17%
total	7%	26%	21%	21%	25%

31. Do you use English in the following situations and how often?

Table 12. Preliminary study: results to Question 31.

	I always use English	**I regularly use English**	**I sometimes use English**	**I rarely English**	**I never use English**
On the internet	48%	27%	7%	12%	7%
At home	3%	13%	22%	19%	36%
With relatives	5%	6%	5%	28%	56%
At work/school	6%	35%	17%	21%	21%
With friends	10%	22%	30%	17%	21%
With neighbors	0%	10%	3%	16%	71%
At stores	2%	8%	5%	14%	71%
On the street	3%	6%	15%	19%	57%
At libraries	3%	6%	8%	11%	72%
At church	2%	5%	2%	13%	78%
At other religious events	3%	5%	2%	13%	77%
With authorities	2%	8%	7%	15%	68%
At community events (e.g., cultural events, festivals, etc.)	27%	10%	8%	21%	34%
For the expression of deeper emotions	13%	16%	11%	23%	37%

For profanity	22%	17%	18%	23%	20%
total	10%	13%	11%	18%	48%

32. If you had to choose between Hungarian, Serbian and English to use only that for the rest of your life, which one would you choose and why?

33. Is there any sort of online community (e.g. Facebook group) where you can communicate with other Vojvodina Hungarians? Yes, No

34. Do you think there is a need for such online communities where you can communicate with other Vojvodina Hungarians? Why yes/no?

35. Are you a member of a Facebook group that includes Vojvodina Hungarians? If so, what is he nature/topic/theme of the group(s)?

36. Are there institutions or people who support the Hungarian language in Serbia? Yes, no

37. Is there a printed newspaper in the following languages to which you have access?* (Circle the ones that are available to you.) Hungarian, Serbian, English

38. Which newspaper would you take off the shelf in the store if it was available in three languages (Hungarian, English, Serbian)? (Circle only one.) Hungarian, Serbian, English

D. Internet use and active online language use (39–45)

39. Do you have access to internet content (websites, news portals, blogs, etc.) in the following languages?* (Circle all that you have access to.) Hungarian, Serbian, English

40. How regularly do you read/visit the following websites? (One can be selected per line. Mark the one that best applies to you.)

Table 13. Preliminary study: results to Question 40.

	Daily	**Regularly**	**Sometimes**	**Rarely**	**Never**
I visit Hungarian websites	48%	17%	25%	7%	3%
I visit Serbian websites	7%	18%	29%	27%	19%
I visit English websites	38%	20%	29%	7%	6%

41. How regularly do you use the following social media sites? (One can be selected per line. Mark the one that best applies to you.)

Table 14. Preliminary study: results to Question 41.

	Daily	Regularly	Sometimes	Rarely	Never
Facebook	44%	11%	34%	5%	6%
Instagram	54%	10%	16%	10%	10%
TikTok	60%	5%	10%	8%	22%
Discord	39%	6%	5%	5%	45%
Reddit	15%	8%	3%	8%	65%
Pinterest	18%	7%	16%	15%	44%
YouTube	31%	27%	13%	8%	21%
Twitter/X	5%	13%	14%	13%	55%

42. What online (internet) activities do you participate in and how often? (One can be selected per line. Mark the one that best applies to you.)

Table 15. Preliminary study: results to Question 42.

	Daily	Regularly	Sometimes	Rarely	Never
I engage in social media activities (e.g. commenting, chatting on Facebook)	73%	8%	16%	3%	–
I write a blog	–	2%	2%	3%	93%
I make TikTok videos	3%	6%	5%	3%	83%
I comment on TikTok or share videos with friends	32%	6%	8%	5%	49%
I share pictures on Instagram	68%	14%	–	–	17%

I post in relation to a blog or online newspaper	–	2%	24%	11%	63%
I share memes	50%	2%	11%	29%	8%
I create and share videos	3%	2%	–	9%	86%
I play video games with friends (Discord, Twitch, streaming, etc.)	33%	2%	6%	30%	29%

43. In which language(s) do you participate in the following online activities?* (You can select multiple languages per line!) **

Table 16. Preliminary study: results to Question 43.

	In Hungarian	**In Serbian**	**In English**	**I do not do it at all**
I engage in social media activities (e.g. commenting, chatting on Facebook)	40	4	32	3
I write a blog	8	1	13	45
I make TikTok videos	18	14	21	26
I comment on TikTok or share videos with friends	27	3	33	46
I share pictures on Instagram	17	4	19	39
I post in relation to a blog or online newspaper	8	3	9	52
I share memes	30	10	29	23
I create and share videos	7	–	7	56
I play video games with friends (Discord, Twitch, streaming, etc.)	17	4	23	37
	24%	6%	25%	45%

44. When you search for something on the Internet (e.g. in Google), in what language do you type the search term? (One can be selected per line. Mark the one that best applies to you!)

Table 17. Preliminary study: results to Question 44.

	Daily	**Regularly**	**Sometimes**	**Rarely**	**Never**
In Hungarian	52%	20%	13%	10%	5%
In Serbian	9%	16%	40%	22%	13%
In English	62%	24%	8%	2%	4%

45. What factors influence the language in which you comment online?* (Circle all that applies to you.) Your first language, Language of comments on the website, Subject of comments or content, Your own cultural background, The language you speak best, Other: _____

* Multiple answers can be marked or given.

** The results indicate the number of times participants chose the given language (for the given activity).

Appendix 2: Interview Questions

A. Background information

- Age, gender, place of birth, current place (settlement) of residence, occupation, spoken languages, first language, nationality

B. Linguistic habits, attitudes, and spoken languages

- Do you use Serbian/English in your daily life, and have you encountered situations where knowledge of Serbian/English is important? Do you feel pressure to become proficient in Serbian/English? If so, for what reasons?

- How would you describe your relationship with Hungarian, Serbian, and English?

- How do you feel about mixing languages in conversations (online and face-to-face)? Is it common among people you know? Can you share some examples of situations where you or others mix languages in conversation?

- Are there specific situations where you prefer one language over another? Why?

C. Digital habits and linguistic practices online

- What languages do you primarily use when communicating online? Do you find it easier to express yourself in one language over another on social media? For what reasons?

- Are there any challenges or benefits you associate with using multiple languages digitally?

- Can you describe what your internet habits and device usage used to look like 10–15–20 years ago when the internet was a novelty in our region? What about nowadays, how and what for do you use the internet and your devices?

- How frequently do you consume and create digital media, such as news articles, videos, photos, or even podcasts? Are there specific social media sources that you trust or rely on more than others? If so, for what reasons?

D. Online communities in Vojvodina

- How do you experience the digital space as a Vojvodina Hungarian? Have you encountered discrimination or challenges related to your national and/or linguistic identity online?
- Are there online communities or resources that have helped you connect with your cultural or

linguistic heritage? Is it important to you to preserve and promote the use of the Hungarian language in this region?

Appendix 3: Final questionnaire

Part 1: Background Information

Circle the answer(s) that best apply to you! The questions that have been starred (*) are cases where multiple answers can be given or circled.

1. Gender: Male, Female, I do not wish to answer, Other: _____

2. Age: under 18, 18–25, 26–35, 36–45, 46–55, over 55

3. Current place of residence (settlement): _____

4. Highest level of education: I did not go to school, Elementary school, Secondary school (gymnasium, vocational school), Associate degree, College – university (bachelor's degree), Postgraduate education (Master's, Doctorate)

5. How can you best describe your current situation in terms of work? I work outside my home – I go to work, I work from home (e.g. homemaker, teleworking), I am retired, I am looking for a job – I am unemployed, I am a student, Other: _____

6. If you are working, circle your area: I am unemployed, Education, Administration, Agriculture, Industry, Health, Other: _____

7. Nationality: Hungarian, Serbian, I do not wish to answer, Other: _____

Part 2: Digital Habits

Circle the answer(s) that best apply to you! The questions that have been starred (*) are cases where multiple answers can be given or circled.

8. Do you use the internet? Yes, No

9. For how long have you been using the internet? (number of years) ____

10. How often do you use the internet? Daily, 3–4 times a week, Once a week, Less than one a week

11. What devices do you generally use to access the internet? * PC, Laptop, Smartphone, Tablet, Other: _____

12. Where do you usually access the internet? * From home, From work, From school, From the city library, From a café, Other: _____

13. Do you typically do multiple things (multitask) at once on your computer, phone, and tablet? (e.g. listen to music while messaging friends as well as studying or doing household chores) Yes, No

14. If you want to find information about something, how do you do it? What is the first thing that comes to your mind? Type it into a browser (Google), Ask AI (ChatGPT, Samsung Assistant, Alexa), Call a friend to ask, Go over to a neighbor to ask in person

15. On a scale of 1–5, how would you rate your confidence in your internet and digital skills? 1 – "I am not confident in using the internet and often need assistance with basic tasks" 5 – "I use the internet with ease and am able to do a variety of tasks without difficulty" (Some examples for tasks can include: browsing the web, sending messages and emails, editing documents, streaming media, using cloud storage)

16. Do you create online content (post, share images, videos on Facebook, Instagram, or other websites) in the following languages?

	In Hungarian	**In Serbian**	**In English**
Yes			
No			

17. How regularly do you use the following social media sites? (One can be selected per line. Mark the one that best applies to you.)

	Daily	**Regularly**	**Sometimes**	**Rarely**	**Never**
Facebook					
Instagram					
TikTok					
Discord					
Reddit					
Pinterest					
YouTube					
Twitter/X					

18. Which language do you most often encounter on the following social media sites? (One can be selected per line. Mark the one that best applies to you. Leave it blank if you do not use the given social media platform at all.)

	Hungarian	Serbian	English
Facebook			
Instagram			
TikTok			
Discord			
Reddit			
Pinterest			
YouTube			
Twitter/X			

19A. In the past week, did you use the internet for the completion of the following tasks? (One can be selected per line.)

	Yes	No
Training/studying		
E-government		
Entertainment		
Finance/e-banking		
Fact-checking/looking up information		
Current affairs/interests		
Travel		
Shopping online		
Social networking		
Diary functions		
Person-to-person networking		
Civic participation: online forums		

19B. How often do you use the internet for the completion of the following tasks? (One can be selected per line. Mark the one that best applies to you.)

	Daily	Regularly	Sometimes	Rarely	Never

Training/studying					
E-government					
Entertainment					
Finance/e-banking					
Fact-checking/looking up information					
Current affairs/interests					
Travel					
Shopping online					
Social networking					
Diary functions					
Person-to-person networking					
Civic participation: online forums					

Part 3: Linguistic habits

20. Which language(s) do you consider your first language (the language(s) you first learnt)?* Hungarian, Serbian, Other: _____

21. If you are bi- or multilingual, which one do you consider to be your first language? This question does not apply to me, Hungarian, Serbian, Other: _____

22. How did you learn the following languages?* (You can mark multiple replies per line.)**

	Hungarian	**Serbian**	**English**
At home from the family			
From friends, neighbors or colleagues			
At school or at language classes			

From the internet			
I do not speak the language / I never learnt it			

23. How often do you encounter the following languages in your daily life? (You can only select one option per row. Please select the option that best applies to you!)

	Daily	**Regularly**	**Sometimes**	**Rarely**	**Never**
Hungarian					
Serbian					
English					

24. If you speak multiple languages, do you usually mix your spoken languages when talking to people from Vojvodina? (For example: You are talking to a Hungarian friend in Hungarian and they switch the language of the conversation from Hungarian to Serbian and back. The switching of languages can apply only to words, but also to entire sentences.) Yes, No

25. Does it bother you if your interlocutor switches to (an)other language(s) during your conversations? (Circle 1 answer from A and 1 answer from B) A) If I speak that other language, it does not bother me, If I speak that other language, it does bother me; B) If I do not speak that other language, it does not bother me, If I do not speak that other language, it does bother me

26. You are going to read a short online conversation among good colleagues below who are discussing their summer holidays. Pay close attention to the way they are speaking to each other. On a scale of 1–5, how much does this type of linguistic practice resemble your own? (1 – not at all; 5 – "I find it very familiar, and I also often speak like that") Circle the number you find most appropriate: 1 2 3 4 5

Original message (Text A):	English translation:
Anna: @Éva ti hogy birjátok ezt a hőséget a** **kolektivnin**?*** Éva: **E pa dobro***** 😁 hát milyen lenne a tengeren ha nem jó? 😁 😁 Ez a**	Anna: @Éva how are you guys handling this heat on the **collective (annual) leave**?*** Éva: **Well, it's great***** 😁 how could it not be good by the sea? 😁 😁 This **weekend house***** is like it was made for us

vikendica*** mintha nekünk lett volna kitalálva** Ernő: **Ajde***** [Serbian loanword] már,** **ne može to***** csak úgy 😀 szólhattál volna mentem volna én is** Éva: **Ej majkemi***** mondtam, hogy jövünk!** **bolded***** text is in Serbian ** indicates Hungarian	Ernő: **Come on***** now, **you can't***** just say that [out of the blue] 😀 you could have said something, I would've gone too Éva: **I swear to God**,*** I told you we were coming here! **bolded***** text is in Serbian in the original message

27. You are going to read a short online conversation among university friends below gossiping. Pay close attention to the way they are speaking to each other. On a scale of 1–5, how much does this type of linguistic practice resemble your own? (1 – not at all; 5 – "I find it very familiar, and I also often speak like that") Circle the number you find most appropriate: 1 2 3 4 5

Original message (Text B):	English translation:
Evelin: gurl* [girl], ugye nem???!** 😩 Szofi: hahahahhh **ja NE MOGU**…..*** de komolyan** 🤣 Evelin: de miéért?? hogy nem veszi észre már?? totál** delulu* [delusional] ez a csaj** Szofi: tell me about it* Szofi: annyira** sus* [suspicious] hogy már a vak is látja xddd** **bolded***** text is in Serbian ** indicates Hungarian * underlined text is in English	Evelin: gurl* [girl], no way???! 😩 Szofi: hahahahhh **I CAN'T**…..*** but seriously 🤣 Evelin: but whyyy?? how does she not notice it by now?? this girl is totally delulu* [delusional] Szofi: tell me about it* Szofi: it's so sus* [suspicious] even a blind person could see it xddd **bolded***** text is in Serbian in the original message * underlined text is in English in the original message

28. Which one of the following languages do you use most in face-to-face and online conversations? (Mark only one per line.)

	Hungarian	Serbian	English
In person			
On the internet			

29. Please indicate which language you choose to use the most in the following situations by putting one X per line!

	Hungarian	Serbian	English
On the internet			
At home			
At work/school			
With friends			
With neighbors			
With authorities			

30. How bravely would you say you use the following languages in-person and on the internet? (Mark only one per line.)

	Bravely	Not so bravely	Do not use it on purpose	I do not speak it at all there
I use the Hungarian language in face-to-face situations				
I use the Serbian language in face-to-face situations				
I use the English language in face-to-face situations				
I use the Hungarian language online				
I use the Serbian language online				
I use the English language online				

31. On a scale of 1–5, how would you rate your skills in the following languages? (1 – lowest rating; 5 – highest rating) (Mark only one per line.)

		1	2	3	4	5
Hungarian	Speaking					
	Writing					
	Listening					
	Reading					
Serbian	Speaking					
	Writing					
	Listening					
	Reading					
English	Speaking					
	Writing					
	Listening					
	Reading					

Appendix 4: Interview excerpts

Quote 1, Levente

"Régen nekünk nem volt egy telefon se néha, hogy lekérdezzük mi a pontos idő vagy hogy megkérdezzük mikor érkezik a busz Kanizsáról Szabadkára, nem hogy az interentről rendeljük meg a zsák krumplit a Trgoprometból [ma: Univerexport] vagy hogy az interenten körösztül nyittassunk számlát egy banknál. A 10 és 12 éves kisunokáim már még a házi feladatukat is ott csinálják és küldik be a tanítónőknek. Ha kellett valamit intézni vagy megkérdezni akkor felültél a biciklire és bementél a **centárba***** [központba] vagy ahova kellett menni és megkérdezted személyesen, papírra felírtad hogy ne felejtsd el."

"Back in the day, we didn't even have a telephone sometimes to dial a number and ask for the precise time or to ask when the bus was to arrive from Kanjiža/Magyarkanizsa to Subotica/Szabadka, let alone to order a bag of potatoes from Trgopromet's [now: Univerexport] website on the internet or to open a bank account over the internet. My grandchildren, aged 10 and 12, even do their homework there and send it to their teachers online now. If you had to take care of something or seek information back in the day, you got on your bike and went to the **centre** [said in Serbian in the original quote] or wherever you needed to go and asked for it in person, and then you put it down on paper so you wouldn't forget."

Quote 2, Éva

"Nekem nagyon nehezen ment eleinte ezeket a gépeket kezelni mostmár úgy egy húsz éve, amikor először a **firmánk***** [cégünk] elkezdte digitalizálni az egész rendszerét. Akkoriban még csak fent az irodákba akik dolgoztak csak ők tudták azokat a gépeket használni de sokszor hallottuk, hogy ők is panaszkodtak, hogy mindent angolul ír a gép. De mostmár megszoktam, szinte már a tévét sem nyitom fel, a rádiót még meghallgatom, a **Novi Sad**-i*** [újvidéki] híreket rajta mert azt több tíz éve minden nap meghallgattam, de már nagyon újságot sem szoktam vásárolni a trafikban, mert mindent megtalálok a telefonon."

"I found it very difficult to use these machines at first, almost twenty years ago now, when our **company** [Serbian loanword] first started to digitize its whole system. At that time, the people working upstairs in the offices were the only ones who knew how to use those machines, but we often heard them complain that everything on them was written in English. But now I've got used to it, I rarely even turn on the TV anymore, but I do still listen to the radio, specifically

the news from **Novi Sad**/Újvidék [said in Serbian in the original quote] out of habit as I have been listening to it every day for ten years, but I don't even buy newspapers in the newsagent's anymore seeing as I can find everything on the phone."

Quote 3, Dorina

"Szinte mindent is ott csinálok, a sulis beadandóktól kezdve a kormányhivatalos dolgokig, a vásárlást főleg ha ilyen Shein vagy Temus oldalról van szó, és amúgy még a telefonos egyenleg feltöltést is neten szoktam befizetni, de rengetegszer a sorozatokat, zenehallgatást és az olvasást is az interneten szoktam csinálni."

"I do almost everything online, from school assignments to government official documents and tasks, and also shopping especially if it's from Shein or Temu, and I even pay my phone bill online, but I also frequently watch my series, listen to music, and do my reading online."

Quote 4, Emina

"Hát ugye mivel mi minden hétköznapot a gép előtt töltünk az irodában, már annyira rá vagyunk szokva, hogy lassan szinte már még a heti shoppingot* [English loanword] is az interneten keresztül végeznénk ha nálunk itt Szabadkán lehetne házhoz rendelni mint magyaroknál [Magyarországon] a boltokból, de lehet ez az egyetlen szerencsénk, hogy nincs ilyen opció még! De egyébként, teljesen őszintén, én egyáltalán nem bánom, hogy manapság már ennyire sok to-do* listás feladatomat el tudom intézni az interneten, mert annyi rengeteg időt megspórolok vele, amit így akkor a családommal és barátokkal tudok eltölteni otthon vagy itt a városban. De amúgy most képzeljétek el, ha még mindig úgy lenne mint régen, hogy hogyha be akartad fizetni a rézsit, akkor külön-külön kellett elmenni a Vodovodba meg a Cimgasba ahogy a tata csinálta; vagy ha éppen meg akartál kérdezni valamit a városházán, ami tuti hülye kérdés lett volna, és ezt most simán letudod egy emaillel. Nem is kell már még idegeskedned sem rajta, mert nem **blamálod*** [járatod] le magad úgy mint élőben. Néha tehát tényleg életmentő tud lenni."

"Since we spend every weekday in the office sitting in front of the computer, we're so used to it that we are this close to doing even our weekly shopping online too if we could get home delivery from stores here in Subotica/Szabadka, like people do in Hungary. But maybe that's

our only luck, that we don't have that option… yet! But in full honesty, I personally don't mind that I can do so many of my chores from my to-do list on the internet, as it just saves so much time, which I can then in turn spend with my friends and family back home or here in the city. Like, imagine if we still had to go to Cimgas [HVAC contractor] and Vodovod [water utility company] separately if we wanted to pay those two bills like my grandpa used to, or go to the city hall just to ask a probably silly question, which we could just send an email now and not even worry about **embarrassing** [Serbian loanword] ourselves in real life. It truly can be a lifesaver at times!"

Quote 5, Gábor

"Engem az általános első óta nem tudtak apámék elszedni a **kompjuter***** [számítógép] elől, minden nap a suli után ott ültem este 10-ig és hallgattam CD-ről a zenéket és közben ment a Neighbours from Hell* játék, azt imádtam nagyon! Most hogy visszagondolok rá, akkoriban még minden angolul volt a settingsben* [beállításokban], meg a játék és a zenék is mind angolul voltak. A Google-t például nem is tudtuk, hogy mire való, mert ha magyarul vagy szerbül írtunk be valamit a keresőbe, akkor mindig olyan furcsaságokat adott ki az oldal… sosem volt sok köze ahhoz, amit beírtunk. De attól még mi így a **drustvón***** [baráti társaságon] belül magyarul meg sokszor szerbül beszélgettünk azon a réges régi MSN üzenetező programon, meg a MySpace-en, és mintha akkor egy időben még a Skype is nagyon ment volna. Aztán később a középben elkezdtünk mindannyian regisztrálni a Facebookra, az is olyan erős emlékem, hogy a mai napig eszembe jut még a Facebooknak az a régi dizájnja. Kábé onnantól kezdve mindenki ott lógott éjjel nappal, és még a suliban az oszink néha azzal jött, hogy nem akar minket látni este 11-kor online, hahahah! Szóval kábé minden lépésünket láttak a tanáraink, ha a Facebookon ismerősök voltunk! Néha eléggé ijesztő volt."

"Ever since I was in first grade, my parents couldn't rip me away from the **computer** [said in Serbian in the original quote]. Every day after school I'd sit there until 10 PM, listening to music on CDs, and playing my Neighbors from Hell game, which I really loved! Looking back now, everything was in English in the computer settings back then, and the games and all the music were in English too. For example, we didn't even know initially what Google was for, because if we typed something into the search bar in Hungarian or Serbian, the page would always come up with such odd things… it never had much to do with what we typed in. But even with all that, we would still chat in Hungarian and quite often in Serbian too within the

friend group [said in Serbian in the original quote] on MSN Messenger, and on MySpace, and if I remember correctly, Skype was also really big for a while then. Then later, in high school, we all started to register accounts on Facebook, and that's also such a vivid memory of mine! I still remember Facebook's old design like it was yesterday! From then on, everyone was online and reachable day and night, and even at school, our homeroom teacher would sometimes warn us that they didn't want to see us online at 11 PM, hahahah! So, our teachers basically saw everything we did if we were friends with them on Facebook – it was quite scary sometimes!"

Quote 6, Emina

"Amúgy ez nekem személyesen nagyon érdekes de nem is normális dolog egyszerre, mert egész életünkben úgy lettünk tanítva, hogy nem épp olyan mindegy hogy beszélünk majd a munkán vagy a községházán. Nekem a mama mindig azzal jött amikor másodikos középsulis voltam, hogy még véletlenül sem beszéljem ezt a saláta nyelvet amit a Janával szoktunk otthon, mert úgy kitesznek a hivatalból, hogy na. Aztán egyszercsak becsöppentünk egy ilyen full serious* atmoszférába, hahahah bocsi, ilyet ugye szabad mondani? […] Na szóval, és egy ilyen atmoszférába kerülünk, aztán meg a tőled 15 évvel idősebb **séfed*** [főnököd] olyan lazán meg össze-vissza beszél veled, hogy csak pislogsz! Tehát tényleg nem erre számítottunk amikor elkezdtünk dolgozni, ugye Jana?"

"By the way, this is personally very interesting to me but also kind of crazy and the same time, because our whole lives, we were taught that it really does matter how we talk at work or at the city hall. My grandma would always warn us when we were in our second year of high school that we should under no circumstances speak that 'salad language' that Jana and I use at home [mixing English, Serbian, and Hungarian], because they would kick us right out of the office. Okay, maybe it wasn't that serious but if I'm being honest, I don't think I ever heard people talking like that back then. So it really is shocking that now, all of a sudden, being dropped into this totally serious atmosphere, hahahah, sorry, is it okay to say things like that? [she asks referring to the expression 'full serious' that she used while talking in Hungarian] […] Well, anyway, we get into an atmosphere like that, and then your **boss** [said in Serbian in the original quote], who is 15 years older than you, starts talking to you in the most casual and chaotic way possible, and you can only blink repeatedly at them in response! So we really didn't expect this when we started working here, right Jana?"

Quote 7, Jana

"Igen, és tényleg, igazából mindenki úgy mondja, ahogy eszébe jut és gyorsabb. Emailekben például, amiket egymás között vagy a más városokban levő bankjaink között küldünk, azokban is annyiszor látunk és írunk keverve angolt a szerbbel, de a magyarral is ha éppen például az Eminának vagy Gábornak írom az emailt. Nagyon stresses tud lenni ez a mi munkánk **savetnik**ként*** [pénzügyi tanácsadóként], főleg így a **klijent**ekkel*** [kliensekkel] és egyszerűen néha nincs arra időd, hogy keresgessed a szót magyarul vagy szerbül, ugye éppen attól függ kivel beszélsz és az ő anyanyelve micsoda. És ritka is az, amikor mondjuk nem angolul vagy szerbül mondjuk ezeket a szavakat. De ez full* normális, a kompikon is így írja mindenkinél, angolul vagy szerbül, szóval értjük mit akar mondani a **kolega*** ** [kolléga]."

"Yes, and truly, everyone basically says things whichever way it comes to their mind and is the fastest. In emails, for example, the ones we send to each other or to our other banks in different cities, we so often see and write in all sorts of ways, mixing English and Serbian, but also Hungarian if, for example, I'm writing the email to Emina or Gábor. Work in finance as a **financial adviser** [said in Serbian in the original quote] can be very stressful, especially with **clients** [said in Serbian in the original quote], and sometimes you simply don't have the time to rack your brain for a word in Hungarian or Serbian, depending on who you're talking to and what their first language is. And it's also so rare when we don't say these words in English or Serbian, for example. This is completely normal, even on the computers these terms are written in English or Serbian for everyone, so we understand what our **colleague** [said in Serbian in the original quote] wants to say."

Quote 8, Emese

"Nálunk itt Vajdaságban az teljesen mindennapos dolog, hogy néha magyarul beszélünk, néha pedig szerbül szólalunk meg, de még az is, hogy néha össze vissza, kinek hogy sikerül vagy hogy a könnyebb. Valamelyik nap épp a zöldpiacon voltam és először szerbül szólaltam meg – ez is egy ilyen szokás nálunk, mert ugye több a szerb, és előfordul, hogy végig szerbül beszélünk a másikkal, aki egyébként szintén magyar, de hát így szoktuk meg és nincs ezzel semmi baj. De olyan is volt már, hogy én szerbül beszéltem valakivel akiről tudtam, hogy szerb volt, ő pedig magyarul válaszolt nekem vissza és az egész beszélgetésünk így folyt."

“Here in Vojvodina, it’s quite an everyday thing that sometimes we speak Hungarian, sometimes we speak Serbian, but there are occasions where we continuously use both of the languages, and it really depends on what way of speaking is easier. The other day I was at the market and started speaking in Serbian out of habit. Considering that there are more Serbs, we sometimes tend to carry out whole conversation in Serbian even with people we don’t know are Hungarians, but that’s okay, this is what we are used to and there’s nothing wrong with that. But there have also been times when I spoke Serbian with someone I knew was a Serb, and they answered me back in Hungarian, and the whole conversation went on like that.”

Quote 9, Dániel

“Sokszor fordul elő, hogy mondjuk nem jut eszembe a szó vagy terminus, emiatt mondom inkább szerbül, de sokszor angolul is attól függően, hogy kivel beszélek. Ha az illető nem tud angolul vagy szerbül, akkor igyekszem nem bedobálni szavakat azon a nyelven, de néha nem tehetek róla és kicsúszik. Viszont kifejezetten vannak olyan pillanataim is, amikor teljes mértékben tudatosan csinálom. Ez például egy focimeccsen is előfordult magyarban [Magyarországon], amikor a magyarok ellen játszottak a szerbek és épp nekik szurkoltam, mert hát ugye büszke vagyok a származásomra. Vajdaság más mint a Magyarország, teljesen más a mentalitás, nyugisabb és jobban érzem a magaménak.”

“It often happens that I can’t recall a word or a term [in Hungarian], and that is the reason I say it in Serbian, sometimes also in English, but that really depends on who I’m talking to. If I know that the person doesn’t know or speak English or Serbian, I try not to throw in words into my speech in that language, but sometimes I can’t help it and they slip out. However, I also have specific moments when I do it fully consciously. This actually happened at a football match in Hungary, when the Serbs were playing against the Hungarians and I was cheering for Serbia, because I am proud of my origins. Vojvodina is different from Hungary, the mentality is completely different, it’s more relaxed and I feel much more at home here.”

Quote 10, Dorina

“Szerintem sokkal érdekesebb és különlegesebb, ha valaki tud így több nyelvet keverni. Én például nagyon sokszor szándékosan keverek bele szerbet a mondókámba, amikor mondjuk olyan környezetben vagyok, ahol fel szeretném hívni mások figyelmét magamra vagy a

származásomra, és igazából az angollal is így van. A neten, főleg TikTokon sokszor keverem az angolt a magyarral, de a szerbet is, mert amióta így van a TikTok, valamiért nagyon menő lett ez a Balkán és hát ki kell ezt a pozíciót élvezni. Na de azért persze nem mindig van ez így, ha komoly témáról van szó, akkor sokkal jobban odafigyelve posztolok vagy írok másoknak és ügyelek a nyelvre is."

"I think it is much more interesting and special if a person knows how to mix multiple languages into their speech [instead of just speaking in one language]. Personally, I often tend to combine Serbian words into my speech intentionally, especially when I'm in an environment where I want to bring attention to myself or my origins, and honestly, it's the same with English too. On the internet, specifically on TikTok, I often mix English with Hungarian, but also Serbian because since TikTok became famous, for some reason the Balkans have become very cool and we have to enjoy and take advantage of this position/privilege. But of course, it's not always like that, if it's a serious topic I'm much more careful with what I write and in what language I am writing."

Quote 11, Dorottya

"Vajdasági barátnőimmel állandóan össze vissza beszélünk, de az a vicces, hogy full megértjük egymást, még akkor is ha magyarul, angolul és ráádaásul szerb szavakkal kombinálva irkálunk a group chatbe vagy beszélgetünk, facetimeolunk."

"We constantly mix together multiple languages when talking with my Vojvodina Hungarian girl friends. The funniest thing is that we can easily understand one another even if our messages are a mix of Hungarian, English, and Serbian words in the group chat or when we Facetime each other."

Quote 12, Gábor

"Néha egyszerűen muszáj egy kicsit feldobni a hangulatot, mert ha nem akkor a végén még olyan rosszra is fordulhat a szituáció, hogy **nedaj Bože***** [ne adj Isten] … mindenki stresszes és semmire sem haladunk egy komplett csapat ideges emberrel. Bankban meg ráadásul, eleve bolodnokháza szokott lenni a kliensek nélkül is."

“Sometimes you just need to lighten a heavy situation because if you don’t, it might actually take a turn for the worse – **God forbid** [said in Serbian in the original quote] – everyone is just stressed, and we won’t get anywhere with a group of frustrated people. Especially in a bank, which is a nightmare of a place even without the clients.”

Appendix 5: Tables summarizing the quantitative data

Table 18. Averages regarding digital devices, frequency of internet use, multitasking, and number of places with internet access based on age groups.

Averages of → Age groups ↓	Multitasking (range: 0 – does not engage in multitasking; 1 – engages in multitasking)	Frequency of internet use (range: 0 – 4; 0 – never, 4 – daily)	Owned electronic devices	The number of places with internet access
under 18	0.92	3.98	2.04	2.47
18–25	0.90	4.00	2.42	4.91
26–35	0.77	4.00	2.27	3.34
36–45	0.70	4.00	2.02	2.21
46–55	0.53	3.98	1.97	2.28
over 55	0.43	3.98	1.82	1.75
Grand Total	0.70	3.99	2.09	2.82

Table 19. First source of information by employment status and educational level.

First source of information (range: 0–3; 0 – go over to a neighbor to ask in person, 1 – call a friend to ask, 2 – type it into a browser (Google), 3 – ask AI (ChatGPT, Samsung Assistant, Alexa)		
Employment status	Student	2.64
	Employed	2.08
	Unemployed / looking for a job	2.08
	Work from home	2.01

	Retired	1.94
	Grand Total	2.19
Highest level of education	Elementary school	2.54
	Secondary school (gymnasium, vocational school)	2.12
	College – university (bachelor's degree)	2.09
	Postgraduate education (Master's, Doctorate)	2.07
	Associate degree	1.88
	Grand Total	2.19

Table 20. Averages of confidence in internet and digital skills, frequency of social media use, and breadth of use across age groups.

Averages of → **Age groups ↓**	**Confidence in internet and digital skills (range: 1–5; 1 – not at all confident, 5 – entirely confident)**	**Frequency of social media use (0–4; 0 – never, 4 – daily)**	**Engagement in the 12 activities (breadth of use) in general: (0–4; 0 – never, 4 – daily)**
under 18	4.51	2.00	2.44
18–25	4.25	2.00	2.80
26–35	4.28	1.83	2.71
36–45	3.67	1.62	2.55
46–55	3.04	1.34	2.46
over 55	2.07	1.33	2.25
Grand Total	3.63	1.68	2.54

Table 21. Averages of multitasking, social media use, and content creation across confidence levels in internet and digital skills.

Averages of → The participants' confidence in their internet and digital skills ↓	Engagement in multitasking (range: 0–1; 0 – no, 1 – yes)	Frequency of social media use (0–4; 0 – never, 4 – daily)	Content creation in Hungarian (range: 0–1; 0 – no, 1 – yes)	Content creation in Serbian (range: 0–1; 0 – no, 1 – yes)	Content creation in English (range: 0–1; 0 – no, 1 – yes)
1 – not confident at all	0.41	1.34	0.83	0.80	0.36
2	0.41	1.38	0.80	0.51	0.19
3	0.70	1.59	0.89	0.53	0.35
4	0.77	1.75	0.85	0.38	0.52
5 – entirely confident	0.83	1.89	0.80	0.29	0.61
Grand Total	0.70	1.68	0.84	0.43	0.46

Table 22. Average social media use frequency by age.

Age groups → Social media use ↓	under 18	18–25	26–35	36–45	46–55	over 55	Grand Total A
	(range: 0 – never, 1 – rarely, 2 – sometimes, 3 – regularly, 4 – daily)						
Facebook use	2.07	3.86	3.92	3.87	3.91	3.82	3.58
Instagram use	3.78	3.36	3.00	2.57	2.03	1.78	2.75
TikTok use	3.14	3.16	2.17	1.47	0.94	0.67	1.93
Discord use	0.96	0.24	0.10	0.08	0.04	0.05	0.25
Reddit use	0.12	0.15	0.43	0.27	0.14	0.20	0.22
Pinterest use	2.34	1.89	1.43	1.45	0.71	1.03	1.48
YouTube use	3.09	2.99	2.94	2.91	2.79	2.84	2.93

Twitter/X use	0.47	0.37	0.64	0.23	0.16	0.24	0.35
Grand Total B	2.00	2.00	1.83	1.61	1.34	1.33	1.69

Table 23. Activities, multitasking, and digital skills based on employment status.

Averages of → **Employment status ↓**	**Confidence in internet and digital skills (range: *1*–*5*; 1 – not at all confident, 5 – entirely confident)**	**Engagement in multitasking (range: 0–1; 0 – no, 1 – yes)**	**Engagement in the 12 activities (breadth of use) in general: (0–4; 0 – never, 4 – *daily*)**	**Frequency of social media use (0–4; 0 – never, 4 – *daily*)**
Student	4.45	0.94	2.57	2.02
Employed	3.64	0.72	2.63	1.61
Unemployed / looking for a job	3.08	0.52	2.28	1.63
Work from home	3.39	0.52	2.44	1.68
Retired	2.09	0.37	2.15	1.28
Grand Total	3.63	0.70	2.54	1.68

Table 24. Breadth of use in general based on age.

Age groups → **Digital activities ↓**	**under 18**	**18–25**	**26–35**	**36–45**	**46–55**	**over 55**	**Grand Total**
	(range: 0 – never, 1 – rarely, 2 – sometimes, 3 – regularly, 4 – daily)						
1. Training/studying	3.31	3.28	2.58	2.67	2.58	2.20	2.77
2. E-government	0.83	1.88	2.23	2.34	2.17	1.66	1.85
3. Entertainment	3.89	3.76	3.54	3.27	3.24	3.19	3.48
4. Finance/e-banking	0.37	2.29	2.49	2.10	1.76	1.68	1.78

5. Fact-checking/looking up information	3.74	3.84	3.69	3.45	3.54	3.41	3.61
6. Current affairs/interests	2.24	3.09	3.09	2.92	3.24	3.44	3.00
7. Travel	2.13	2.65	2.50	2.57	2.65	1.92	2.40
8. Shopping online	1.83	2.51	2.54	2.37	2.02	1.31	2.09
9. Social networking	3.86	3.84	3.73	3.59	3.28	2.94	3.54
10. Diary functions	1.27	0.89	0.76	0.36	0.29	0.24	0.63
11. Person-to-person networking	3.96	3.96	3.84	3.43	3.32	3.61	3.68
12. Civic participation: online forums	1.87	1.65	1.47	1.53	1.44	1.45	1.56
Grand Total	2.44	2.80	2.71	2.55	2.46	2.25	2.54

Table 25. Frequencies of language contact with Hungarian, Serbian, and English.

Averages of → **Age groups ↓**	**Frequency of contact with Hungarian**	**Frequency of contact with Serbian**	**Frequency of contact with English**
	(range: 0–4; 0 – never, 4 – daily)		
under 18	3.92	3.17	3.77
18–25	3.98	3.38	3.34
26–35	3.97	3.44	3.11
36–45	3.98	3.29	2.47
46–55	3.99	3.64	2.41
over 55	3.94	3.53	1.88
Grand Total	3.96	3.41	2.83

Table 26. The Vojvodina Hungarians' language choices in different online and face-to-face contexts.

Averages of → Age groups ↓	The language they use the most frequently in person	The language they use the most frequently on the internet	The language they use the most frequently at work/school	The language they use the most frequently with authorities and in official settings	Grand Total A (language choices overall)	The language they most often see on the internet
	(range: 0–2; 0 – Serbian, 1 – Hungarian, 2 – English)					
under 18	1.03	1.81	0.97	0.30	1.03	1.82
18–25	1.00	1.45	0.90	0.30	0.91	1.70
26–35	1.02	1.12	0.81	0.32	0.82	1.52
36–45	1.01	1.08	0.75	0.28	0.78	1.25
46–55	1.00	1.02	0.72	0.18	0.73	0.99
over 55	0.97	1.03	0.67	0.12	0.70	0.95
Grand Total B	1.01	1.25	0.80	0.25	0.83	1.37

Table 27. Attitudes towards translanguaging among Vojvodina Hungarians based on the responses to Questions 24–25.

Averages of → (range: *0–1*; 0 – no, 1 – yes) Age groups ↓	Engagement in translanguaging	Does it bother you when someone you are speaking to switches between languages that you do not speak?	Does it bother you when someone you are speaking to switches between languages that you also speak?
under 18	0.88	0.24	0.02

18–25	0.81	0.42	0.03
26–35	0.77	0.40	0.03
36–45	0.52	0.61	0.12
46–55	0.52	0.61	0.16
over 55	0.55	0.81	0.12
Grand Total	0.67	0.51	0.08

Table 28. Attitudes towards translanguaging among Vojvodina Hungarians based on the responses to Questions 26–27.

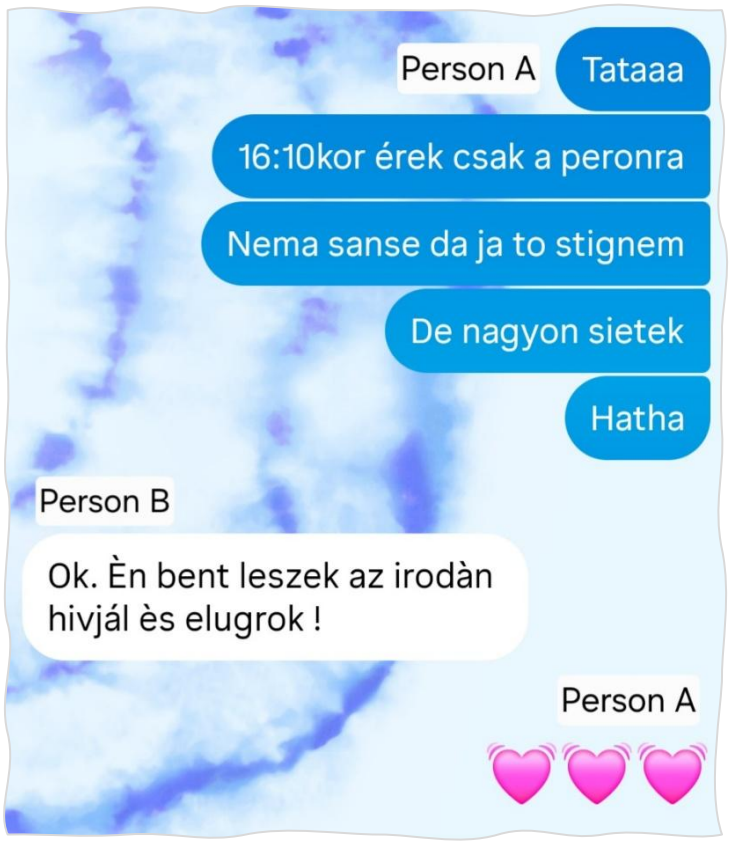
Averages of → **(range: *1–5*;** **1 – not at all,** **5 – very similar)** **Age groups ↓**	**On a scale of *1–5*, how much does this type of linguistic practice resemble your own?** **Text A (Serbian–Hungarian)**	**On a scale of *1–5*, how much does this type of linguistic practice resemble your own?** **Text B (Hungarian–English–Serbian)**
under 18	3.10	3.62
18–25	3.28	3.49
26–35	3.40	3.27
36–45	3.31	2.11
46–55	2.94	1.33
over 55	2.80	1.04
Grand Total	3.14	2.48

Appendix 6: The Vojvodina Hungarian participants' shared screenshots in their full resolution

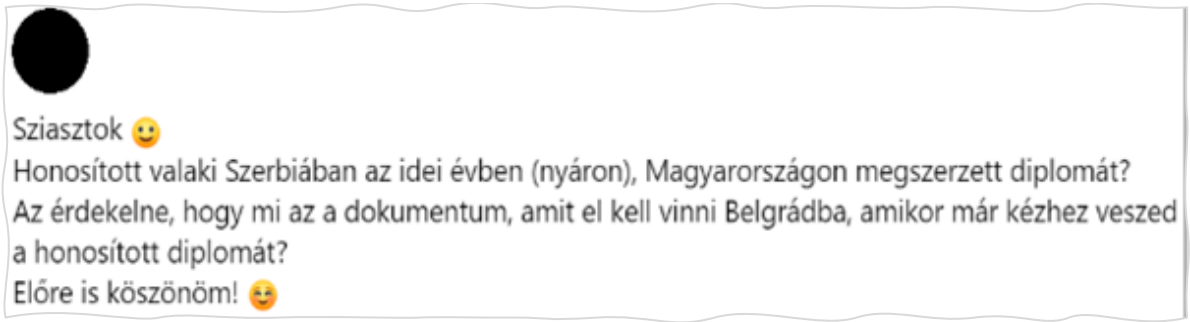
Dorottya's messages to her sister. (Figure 13)

Jana's messages with Gábor: asking for help at work. (Figure 14)

Emina's messages to her father: arriving home on time. (Figure 15)



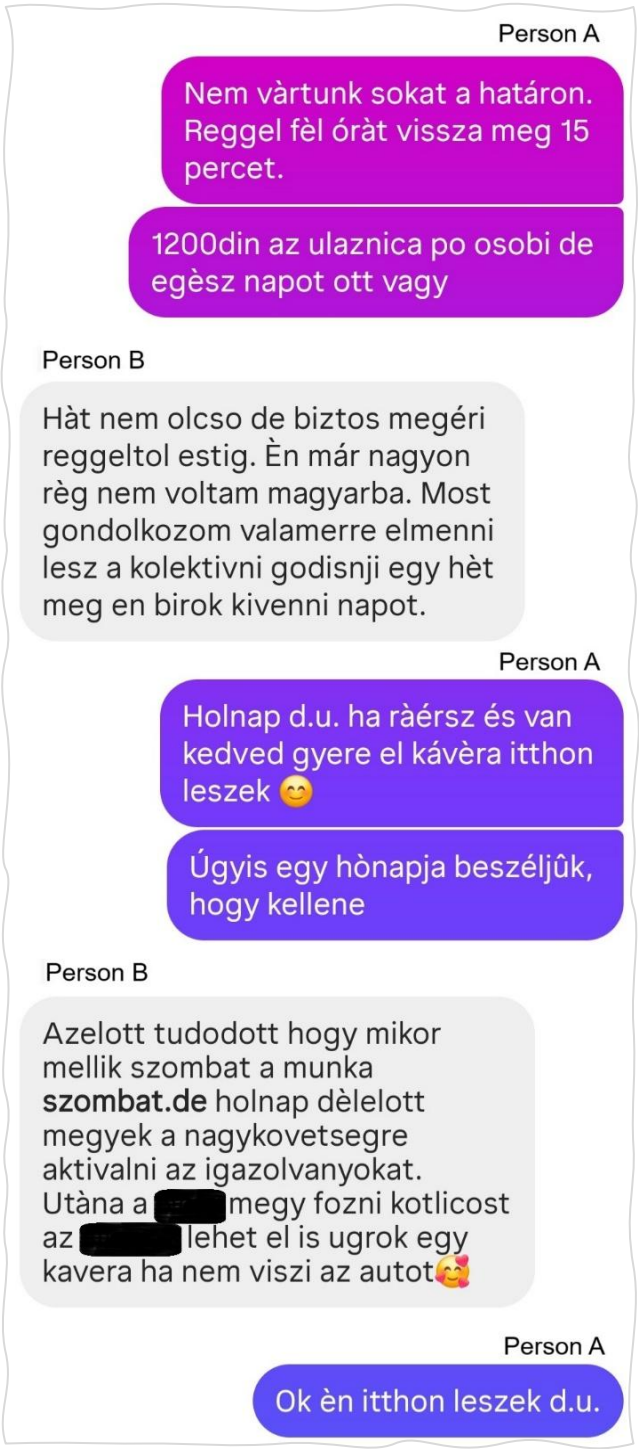
Dorina's public Facebook post in a Vojvodina Hungarian Facebook group. (Figure 26)



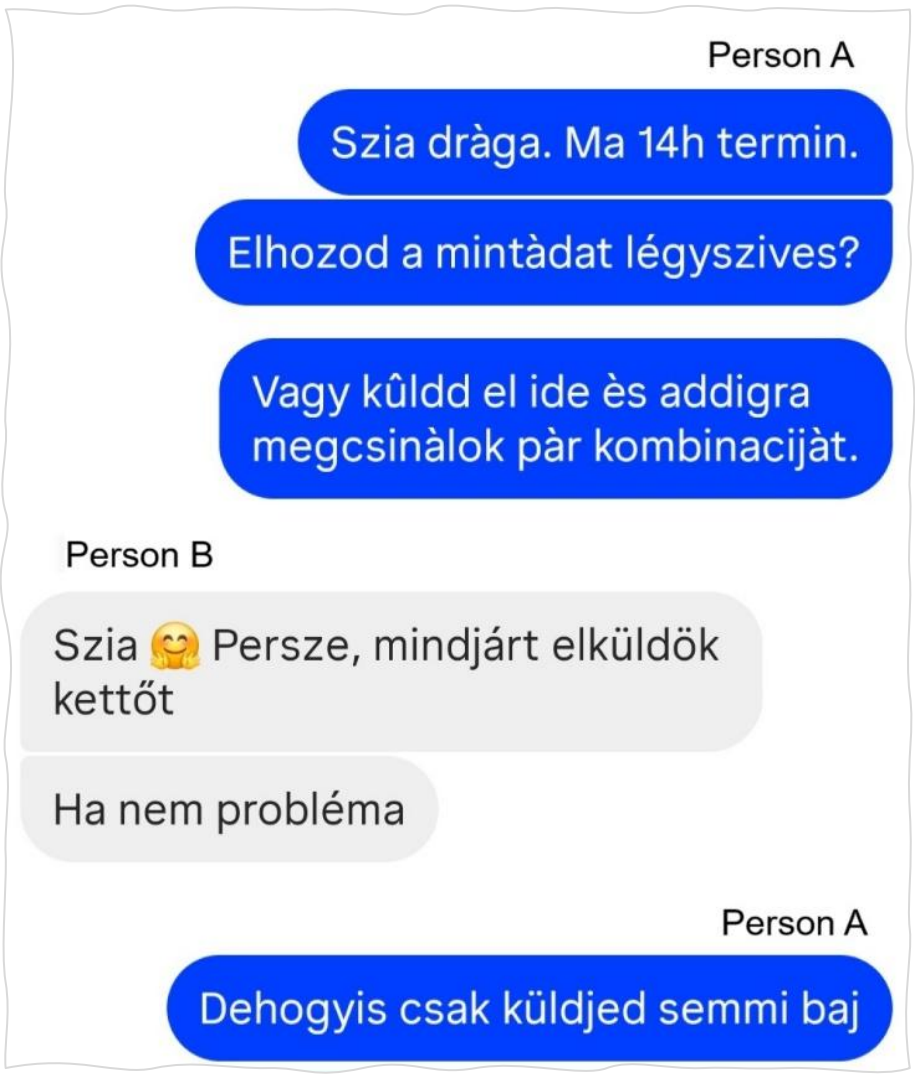
Endre's messages with his father about basic housework related things. (Figure 16)

Levente's messages with his wife asking about scheduling appointments. (Figure 17)

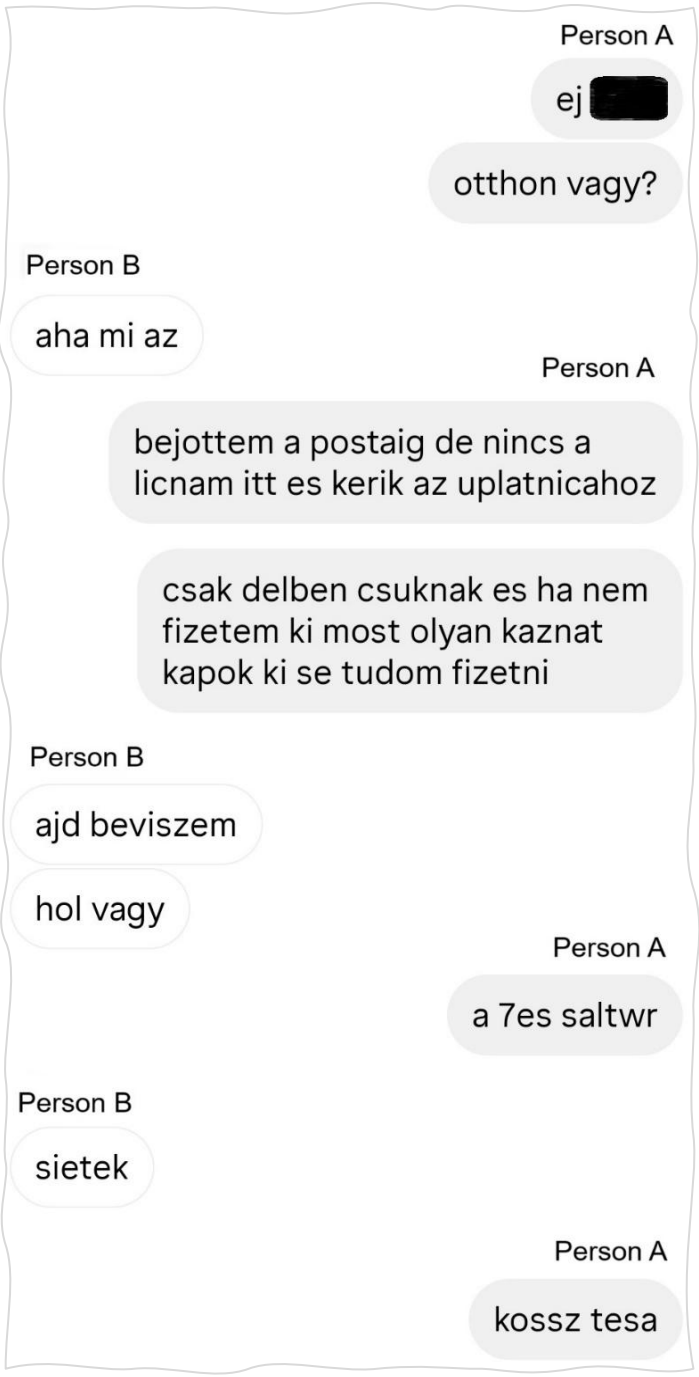
Luca's messages with her best friend: chatting about how they spent their weekends and planning a meetup. (Figure 18)



Luca's messages to a younger client: asking for client's inspirational nail art photos for their appointment. (Figure 19)

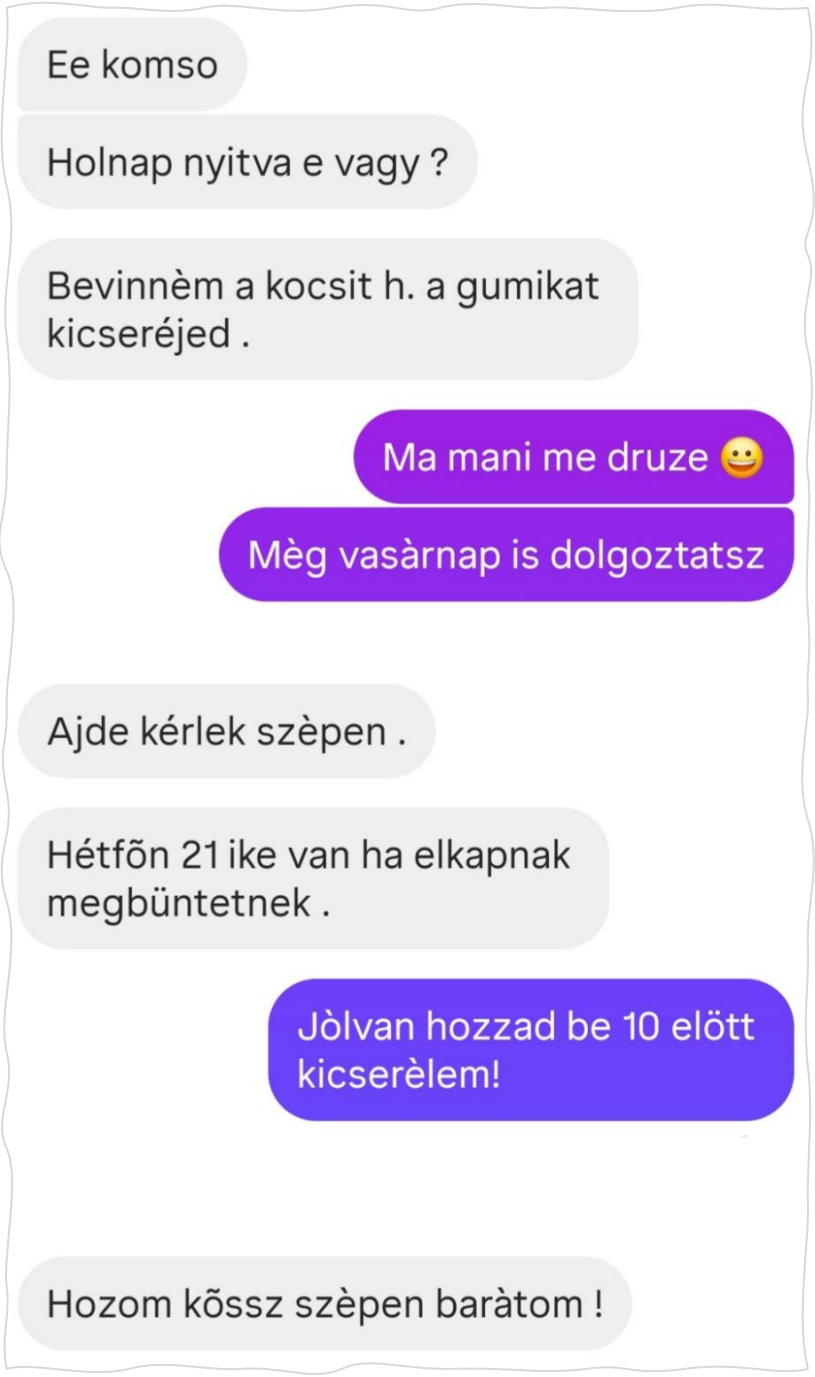


Dániel's messages to his younger brother: asking for a favor. (Figure 20)

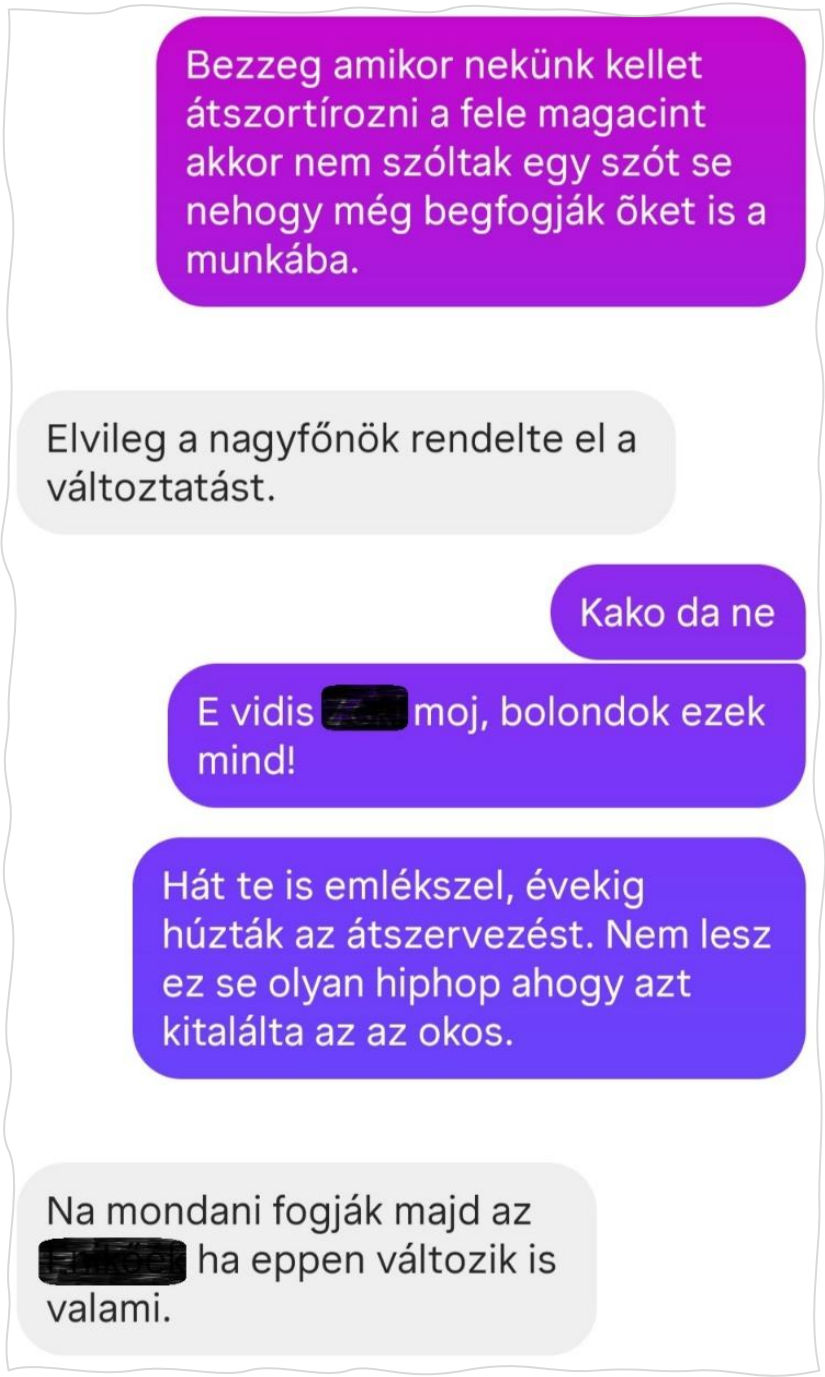


Dániel's messages in a Vojvodina Hungarian group chat. (Figure 21)

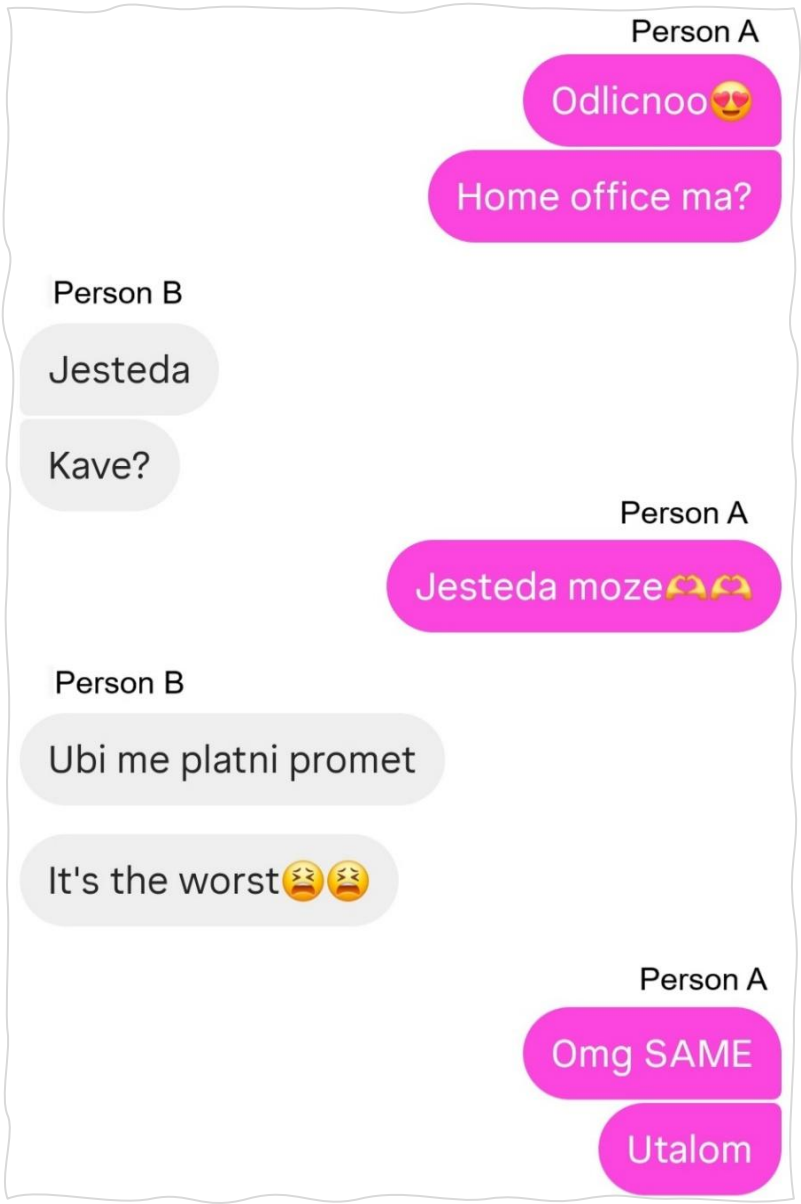
Levente's messages with his friend about an appointment at his car repair shop. (Figure 22)



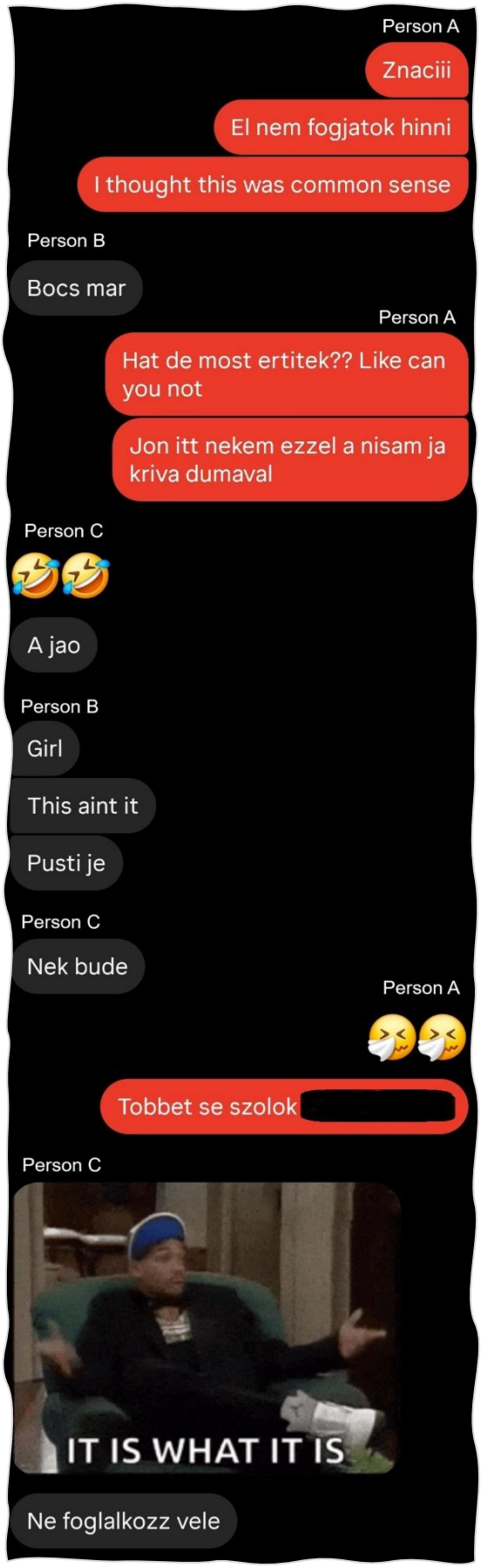
Leon's messages with a former colleague discussing news about the firm they used to work at. (Figure 23)



Emina's messages with Jana talking about making plans and work. (Figure 24)



Dorina's private messages with friends gossiping about an old classmate. (Figure 25)



Dorottya's messages with two of her friends discussing a birthday meetup. (Figure 27)

Gábor's messages related to work with colleagues. (Figure 28)