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When Roles Are Reversed: Bridging the Digital Divide through Intergenerational Learning Practices in Serbia

Abstract: This paper explores how older adults in Serbia overcome the digital divide through the perspectives of younger family members who support and narrate their relatives' engagement with digital technologies. Drawing on ethnographic research, the study highlights the relational practices and everyday strategies through which older adults bridge technological gaps, often in the absence of formal support. Grounded in the concept of the third-level digital divide, intergenerational solidarity, and social learning theory, the findings show that older adults gain not only technical proficiency but also social, cultural, and emotional benefits through sustained, guided engagement. By reversing traditional educational roles where younger relatives become facilitators of learning, the study demonstrates how family networks play a central role in overcoming the digital divide, fostering connection, trust, and shared meaning in everyday digital life.

Keywords: digital inclusion, intergenerational learning, aging and technology, family, ethnography in the third person

Introduction: Digital Divide among Older Adults in Serbian Context

In the contemporary digital era, connection to technology and the competence to navigate it have become crucial for social participation, access to services, and the overall quality of life. The rapid proliferation of digital tools has reshaped how people communicate, acquire information, and interact socially, turning technology into an integral part of everyday experience across generations. Despite the ubiquity of digital technologies, their everyday use remains

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unevenly distributed. Various social groups continue to encounter barriers to full digital participation, including those shaped by age, education, socioeconomic status, and geographic location (Čejko 2019, 114–117). Among them, older adults are often particularly affected, as their engagement with digital technologies is limited by factors such as lower digital literacy, cognitive challenges in acquiring new skills, or economic constraints in obtaining devices and stable connectivity. These interrelated factors jointly produce what scholars have described as the *digital divide* (Olphert, Lamodaran and May 2005; Čejko 2019, 115; van Dijk 2020).

These questions acquire particular relevance in the Serbian context, too, where demographic aging coincides with sustained youth emigration, reshaping the social fabric of families and care relations (Manić, Milivojević i Mikić 2020, 143; Milosavljević 2024, 48). As the population ages, an increasing number of older adults depend on digital technologies to access services, maintain social ties, and participate in everyday life. Meanwhile, the continuous emigration of younger generations has altered family constellations and intergenerational relations, often placing technology at the core of care and communication practices that bridge physical distance. The COVID-19 pandemic further intensified these dynamics, underscoring the role of digital connectivity as an essential infrastructure of social life (Flynn 2022; Manić, Milivojević i Mikić 2023; Radivojević 2024). Together, these shifts show that understanding digital inclusion in Serbia requires attention not only to access but to the relational and intergenerational contexts in which technology is embedded.

For many urban, middle-class[1] households in Republic of Serbia, the primary context of my ethnographic fieldwork, the use of digital technologies is already a reality of daily life. In such households, digital literacy is not only functional but woven into family routines. These families, described as *highly connected*, often maintain multiple digital devices and enjoy stable, unlimited internet access (Čejko 2019, 180–181), which is closely tied to their economic circumstances and markedly different from the limited access many others face.

[1] The concept of class in this context will not be problematized, and it refers to a broadly understood way of life of a given group – their perception of family, marriage, health, education, consumption, urban restructuring, and identity. The aim is to show how people perceive themselves, how they make decisions about the types of jobs they do, the products they buy and consume, where they live, how they relax and entertain themselves, whom they choose as partners, and how they raise their children. In this way, it can be said that the middle class and its culture represent a lived experience and manifestation of specific socioeconomic relations that emerge in particular historical and spatial contexts, articulated through specific parameters of gender, nation, and ethnicity (Heiman, Liechty and Freeman 2012, 3).

Official statistics underscore these patterns. According to the Statistical Office of the Republic of Serbia, 95.9% of respondents owned a mobile phone at the beginning of 2024, while 88.8% had internet access.[2] These figures reflect a steady increase in the adoption of digital technology over time, suggesting that digital tools are becoming increasingly accessible in households. However, as these numbers show, access alone does not guarantee meaningful engagement or confident, skilled use, particularly among older adults. It remains uneven, highlighting the continued need for targeted and context-sensitive digital literacy programs.

The gap between infrastructural access and effective use is also recognized at the policy level. The European Union's *Digital Compass*[3] *envisions that by 2030, at least 80% of the population in EU member states will possess basic digital skills (European Commission 2021, 4, cited in Manić i Miljković 2022, 131). In Serbia, as a candidate country, these aspirations are reflected in a series of national strategies and programs that position digitalization as a central development priority. The Government establish the Office for Information Technologies and eGovernment (Kancelarija za informacione tehnologije i elektronsku upravu*) which became a key step in implementing initiatives such as *Serbia Digitalizes* (*Srbija digitalizuje*)[4] and various retraining and upskilling programs. Complementary efforts by other ministries have embedded digitalization into legal frameworks, development strategies, and public programs designed to foster technological competence across the population.[5]

However, despite these structural advances, the picture looks fairly different from an ethnographic perspective. Research shows that the development of digital literacy in Serbia is uneven, with disparities shaped by age, socioeconomic status, education, and geographic location (Todorović et al. 2019), and public-facing and inclusive initiatives specifically addressing the needs of older adults remain scarce.[6] In many middle-class Serbian families, the combination

[2] The aforementioned statistical report shows that the majority of users access the internet via mobile phones, while a slightly smaller number own computer. The data vary depending on education level, economic status, type of settlement, and gender. https://publikacije.stat.gov.rs/G2024/Pdf/G202416019.pdf

[3] https://commission.europa.eu/strategy-and-policy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_en

[4] https://www.ite.gov.rs/extfile/sr/4293/Program%20Srbija%20digitalizuje1.pdf

[5] E.g.,https://pravno-informacioni-sistem.rs/eli/rep/sgrs/vlada/strategija/2020/21/2/reg; https://socijalnoukljucivanje.gov.rs/wp-content/uploads/2021/12/Izvestaj_o_digitalnoj_ukljucenosti_u_Republici_Srbiji_2018-2021.pdf

[6] A notable example is the 2024 campaign *Everything Is Easy When You Know How* (*Sve je lako kada znaš kako*), funded by the Delegation of the European Union to Serbia. The project provided free digital literacy training in Belgrade, Novi Sad, and

of material access, ongoing guidance from younger relatives, and supportive everyday practices creates pathways toward meaningful digital inclusion. These intergenerational interactions, where younger family members often act as informal mentors helping parents or grandparents navigate devices, applications, and online spaces, extend beyond formal training to foster confidence, autonomy, and emotional reassurance. Such findings situate the Serbian experience at the intersection of structural policy initiatives, material access, and lived relational practices, highlighting that digital literacy is not only a technical skill but also a social phenomenon co-constructed through everyday encounters and shaped by broader demographic, cultural, and economic conditions (Ungureanu 2024, 86).

While the digital divide has often been examined through the lenses of policy, formal education, and infrastructure, far less attention has been given to the informal settings where digital skills are actually learned, shared, and negotiated in everyday life, especially in domestic context. Institutional programs tend to focus on measurable outcomes such as operating devices, completing online forms, or accessing digital services (Rosales and Blanche-Tarragó 2021, 329). Still, much of what makes digital engagement meaningful happens elsewhere, in quieter, more intimate spaces of home. In these settings, moments of guidance often unfold gently, across kitchen tables, or through patient repetition. What may seem like simple technical assistance often carries a deeper emotional weight – it fosters intimacy, strengthens bonds and fosters mutual (mis) understanding across generations. Learning to navigate digital environments is therefore not just a matter of acquiring skills, but a relational process based on empathy, patience and shared curiosity. In this sense, such practices do more than bridge the digital divide. They sustain intergenerational solidarity and affirm the value of caring. (Bengston and Roberts 1991; Comunello, Fernández Ardèvol and Belotti 2016; Marshall, Dezuanni and Hourigan 2025).

Drawing on ethnographic material collected for the purpose of doctoral research, this paper examines how everyday acts of digital mentorship rooted in family relationships mediate inclusion, learning, and care. Based on fieldwork conducted among younger family members who support older relatives in navigating digital technologies, the study illuminates the relational dynamics through which knowledge, patience, and emotional labor circulate across gen-

Niš, while simultaneously promoting intergenerational cooperation by encouraging younger family members to support older participants.

https://europa.rs/sve-je-lako-kad-znas-kako/#:~:text=Kampanju%20pod%20sloganom%20. Some of the advertisements created as part of this campaign that are aired on television include:

https://www.youtube.com/watch?v=63t-bxhHR90; https://www.youtube.com/watch?v=_DnX9W5cAL4; https://www.youtube.com/watch?v=_F8XtB524uQ; https://www.youtube.com/watch?v=utwdwKzLu_s

erations. Building on the concepts of the third-level digital divide, intergenerational solidarity, and social learning theory, this analysis explores how digital practices produce not only technical skills but also caring engagement. It also considers how these practices respond to practical and emotional challenges, reconfigure household hierarchies, and reinforce intergenerational bonds. By situating informal digital learning within broader social, cultural, and policy contexts, the paper highlights the importance of understanding digital inclusion not only as a matter of access and competency but as a relational and moral practice embedded in the fabric of family life.

A Theoretical Framework: The Third-Level Digital Divide, Intergenerational Solidarity, and Social Learning Theory

The concept of the *digital divide* emerged in the political discourse of the 1990s before entering academic research, where it became a key framework for understanding inequalities in the digital age (van Dijk 2020, 25–28). Initially, the issue was understood primarily as one of access – who did and did not have connectivity to digital technologies. This *first-level digital divide*, dominant from the mid-1990s to the early 2000s, focused on the physical availability of devices and infrastructure, both globally and locally (Norris 2001; van Dijk 2005). As the availability of digital devices and the internet expanded, researchers realized that these early definitions were too narrow because the mere presence of technology did not automatically translate into meaningful participation (van Dijk 2020, 43–46).

The *second-level digital divide*, gaining prominence in the first decade of the 21st century, shifted attention from access to use. It highlighted that digital inequalities persisted through differences in how people engaged with technology – their digital skills, literacies, attitudes, and motivations (Warschauer 2003; van Dijk 2005; van Dijk 2006). However, even this focus on competence and usage could not fully explain why digital participation resulted in such uneven outcomes across social groups.

This is where the notion of *the third-level digital divide* (van Dijk 2020, 34–37) becomes central to understanding digital inequality today.[7] This framework

[7] In recent years, *the fourth-level digital divide* has become increasingly recognized as digitalization expands into all spheres of life, revealing how algorithmic systems and data economies reproduce and amplify social hierarchies It refers to structural and sociotechnological inequalities arising from algorithmic governance, the concentration of technological power, and unequal modes of access and participation in the digital sphere, which deepen existing social disparities and create new forms of digital elites and exclusion (Kuzmanović 2022, 60–61).

reframes digital inequality by asking not only who has access to and can use technology, but who benefits from it and how. Rather than focusing solely on access or skills, it draws attention to motivations and outcomes. These may be economic (employment, income, mobility), social (sustaining networks), cultural (participation in symbolic life), or personal (belonging, continuity, well-being) (Helsper 2012, 406–409). From this perspective, digital inequality is not a binary condition of inclusion versus exclusion but a continuum shaped by the uneven distribution of economic, social, and cultural capital (van Deursen et al. 2017). The ability to benefit from technology thus depends on broader social resources, life trajectories, and contexts of interaction. Thus, the third-level digital divide marks a conceptual shift, it moves beyond viewing technology as an external tool toward understanding it as embedded in the fabric of social relations, everyday practices, and shared meanings.

Because the capacity to benefit from digital engagement is deeply relational, the family emerges as a key arena among older adults where digital inequalities are negotiated and reconfigured. The concept of intergenerational solidarity offers a useful framework for understanding how these relational and affective dynamics take shape within family networks. Bengtson and Roberts identify six dimensions of solidarity – *structural solidarity* (the structural possibilities and limitations of intergenerational interaction, such as proximity of residence), *associative solidarity* (the frequency and patterns of interaction in various shared activities), *normative solidarity* (commitment to performing family roles and fulfilling family obligations), *consensual solidarity* (the degree of consensus on values, beliefs, or attitudes among family members), *affective solidarity* (the emotions felt toward family members and reciprocity in feelings), and *functional solidarity* (the type and degree of support exchange among family members) (Bengtson and Roberts 1991). These dimensions resonate throughout the experiences I encountered in the field, illustrating how families sustain cohesion through shared practices, mutual support, and everyday exchanges.

Within these relationships, learning unfolds less as formal instruction and more as an everyday, relational process. Digital engagement is often mediated by younger relatives who offer guidance, encouragement, and emotional reassurance. These intergenerational interactions not only enable skill acquisition but also strengthen bonds of trust and reciprocity, embedding digital learning within meaningful everyday routines. Viewed through the lens of *social learning theory* (Bandura 1971), these dynamics reveal how observation, imitation, and shared practice shape digital competence. In this sense, family-based digital mentorship becomes a form of social learning grounded in trust and affective reciprocity.

By combining the frameworks of the third-level digital divide, intergenerational solidarity, and social learning theory, this analysis approaches digital participation as a process through which social, cultural, and emotional outcomes are unevenly distributed but continuously re-examined in everyday life. This

perspective shifts attention from abstract models of access and skill to the lived textures of how people learn, connect, and make meaning through technology. In this view, the digital divide is not merely technical or generational, it is profoundly human, revealing the intersections of knowledge, emotion, and social value in a digitaly connected world.

On Methodology and Research: Ethnography in *the Third Person*

My doctoral research explored the dynamics of closeness and intimacy within families, friendships, and partnerships, in the context of digital technology use, focusing on the lived experiences of millennial participants. Within my participants' narratives, older relatives surfaced unexpectedly, such as a father learning online banking, or refusing to use a smartphone, or a mother deleting her contacts. Listening to participants describe their parents and grandparents revealed how generational difference was not only spoken about, but also felt and often moralized. Saying a parent was "bad with technology" rarely referred solely to skill but also carried overtones of love, irritation, and responsibility. These seemingly peripheral moments became central to understanding the fabric of intergenerational digital life. Through them, participants conveyed how digital knowledge circulates within families through care, frustration, and affection. In Serbia, where digitalization intersects with migrations, precarity, and intergenerational dependence, these narratives illuminate how technologies shape everyday life, revealing new forms of care, authority, and belonging in the digital age.

Through these stories, a distinct ethnographic approach began to take shape, which I later described as *ethnography in the third person*. Rather than emerging from direct observation or physical co-presence with older adults, the ethnographic material discussed here derives from vicarious accounts, stories that participants shared about their parents and grandparents. This mediated way of knowing foregrounds how learning, care, and adaptation move across generations. In this ethnographic stance, older adult interlocutors are not present through direct encounter, but through intimate observations of others, which allows their experiences to emerge indirectly but vividly. Understanding the digital lives of older adults, therefore, means paying attention not only to what they do, but also to the relational networks and mutual responsibilities through which they are represented and cared for, revealing digital inclusion as both practical support and shared emotional and moral labor.

Generational positioning plays a central role in shaping these dynamics. In both popular and academic discourse, younger people are often portrayed as *digital natives* (those who have grown up immersed in digital environments), while

older cohorts are framed as *digital immigrant* (those who encountered these technologies later in life) (Prensky 2001; Prensky 2009). In this study, generation serves not as a fixed demographic category but as a heuristic for understanding how people interpret difference, learning, and interdependence across age lines. Rather than as predefined groups, generations are approached as situational experiences shaped by shared social and technological conditions, which are continuously reinterpreted in everyday life. As fieldwork unfolded, differences between younger and older participants emerged through language, gestures, and subtle negotiations of digital competence and authority. Younger participants, primarily Millennials, Gen Z, and emerging Alpha, tended to see technology as an extension of self and sociality, while older interlocutors, mostly from Generation X and the Baby Boomer group,[8] approached it as something to be learned, adapted to, or occasionally resisted. These generational framings function less as analytical boxes than as lenses that illuminate how age, experience, and digital literacies intersect within families and shape intergenerational solidarity.

The fieldwork informing this article was conducted from October 2020 to April 2022, during the COVID-19 pandemic, when digital connectivity was inseparable from social life. As screens became crucial spaces of shared presence in times of limited physical proximity, interviews with participants were conducted both in person and online, continuously and on multiple occasions throughout the research period. Twenty respondents participated, aged between 27 and 41, with most between 29 and 35. Nine identified as men and eleven as women. They lived primarily in Serbia's larger cities (Belgrade, Novi Sad, and Niš) or were temporarily residing abroad in France, Belgium, Austria, or Switzerland, maintaining close family and social ties mainly through digital devices. Most participants were highly educated, with several holding master's or doctoral degrees, and either employed or self-employed in professions often related to digital technologies. They lived alone, with partners or friends, in rented apartments, or with parents. Based on these conditions, they can be described as middle-class, whose lifestyles and experiences provide a lens through which to explore the everyday practices, negotiations, and relationalities of digital engagement across generations.

Intergenerational and Social Learning of Digital Skills: Ethnographic Insights

As illustrated, the *digital divide* is a key topic for public policy makers, representing significant political issues and forming parts of development strategies, initiatives, and educational programs, not only in Serbia, but also globally,

[8] On generations see more in Matović 2021; Dimock 2019.

particularly in European Union countries and the United Kingdom, whose models we strive to implement.[9] Although legislation often articulates progressive aims, its implementation frequently diverges from practice. Despite the rhetorical inclusivity of many policy frameworks, a noticeable gap persists between their intended goals and the realities on the ground. In conversations with my millennial interlocutors about how their parents or grandparents engaged with digital technologies, a shared observation emerged that while numerous public policies, strategies, and programs were designed with commendable intentions, they have produced limited tangible impact. They often fail to adequately address the needs of specific demographic groups, particularly older adults, who are frequently marginalized in digital inclusion efforts. Against this backdrop of policy limitations and partial implementation, everyday family life becomes a key arena where learning digital skills is negotiated and cultivated through informal practices rather than formal programs.

In the course of my research, learning digital skills among older adults often unfolded through spontaneous, relational exchanges – moments of help, observation, or shared experimentation between family members. These interactions, though seemingly ordinary, played a significant role in transferring digital knowledge and building confidence, particularly among older adults. Rather than structured teaching, it was the casual and affective dimensions of family life (showing, explaining, troubleshooting together) that sustained ongoing engagement with technology. In this sense, what might be described as intergenerational solidarity (Bengtson and Roberts 1991; Taipale 2019) operated less as a formalized system of support and more as an everyday practice of care and cooperation.

Analysing ethnographic data collected during fieldwork, I identified four themes that illuminate how intergenerational learning of digital skills unfolds in everyday life through my participants' narratives. These themes form the backbone of the interpretation and analysis: 1) reversed roles between traditional *learners* and *teachers*; 2) the process of digital learning among older adults; 3) individuals' personal motivation; and 4) shared time characterized by emotional connectedness. Each theme represents a distinct but connected dimension of family interaction which, despite differences in form and content, collectively offers deeper insight into how digital competencies and social support are transmitted and sustained across generations. Together, they highlight not only the practical aspects of intergenerational learning but also its emotional, structural, and symbolic significance. In the sections that follow, I examine each theme through ethnographic narratives.

[9] The European Skills Agenda views digital inclusion as one of the essential elements of citizenship (https://ec.europa.eu/social/main.jsp?catId=1223andlangId=en), and in line with this, there are numerous support and learning programs within institutions, especially for marginalized groups, including the elderly. However, this is not the case in our country.

Reversed Roles between Traditional "Learners" and "Teachers"

Among the clearest shifts observed in everyday intergenerational digital skills learning is the reversal of roles between those traditionally seen as *teachers* and *learners*. Historically, elders have occupied the position of knowledge holders and primary caregivers, guiding younger family members through the complexities of life. However, in the context of the use of digital technologies and digital literacy, this dynamic is often reversed. Within my participants' narratives, one of the most striking dynamics that emerged is the reversal of *normalizied* familial roles in the context of digital literacy, signalling a significant shift in family power dynamics and traditional roles. Younger generations and family members often more digitally fluent due to early and frequent exposure become the new guides, instructors, and even caretakers within the digital realm. This shift challenges established power dynamics and reshapes family interactions. For instance, a twenty-eight-year-old interlocutor describes how she became the instructor for her mother's digital literacy journey:

> My mom got into all of this much earlier, so I had to teach her and open her Facebook profile and show her how to use everything, even though she had been working on a computer as a journalist the whole time, but only out of necessity. So, I trained her a bit on how to use the internet, how to search for information on Google, and how she couldn't write a full sentence, but had to write keywords to find the answer to her question. I would send her websites where she could read things that would interest her, and then it slowly developed for her to learn how to use social media. With my dad, it was much easier, but he was never interested in it.

On the other hand, another thirty-year-old participant described how her sister takes responsibility for guiding the older family members in using digital technologies. Although their parents had never shown much interest in computers, they embraced mobile phones and made consistent efforts to improve their skills. In contrast, while her parents are now confident in using digital tools and navigating new forms of communication, the grandparents' generation continues to find these technologies more challenging, requiring ongoing support and patience from younger relatives:

> They've (parents) mastered it well, but grandmothers and grandfathers, for example, not so much. Grandfathers never wanted to have mobile phones, while grandmothers did. They've had mobile phones for over 10 years now. And they find it funny. I remember the last time we took a picture and my grandmother says – 'Is that a selfie? Is that a selfie?' She heard it on TV somewhere and adopted it, but she's not really sure what it is My sister has the most patience with our grandparents, so she calls them and explains everything, from how to use the remote control to everything else. But they accepted it well, and I'm really glad about that.

the participant said with a smile and affection.

This reversal involves more than a simple transfer of technical knowledge. It signals a broader transformation in how authority, expertise, and dependency are distributed within families. Younger family members, once positioned primarily as learners, are now expected to teach often informally and without preparation skills that are essential for contemporary social participation, such as navigating smartphones, managing online accounts, or accessing digital health services. Their effectiveness as *new teachers* (see Xiaohong 2001) depend not only on technical competence but also on their capacity for patience, clear communication, and emotional labour. The persistence of younger relatives and their willingness to repeatedly explain and support older family members fosters a form of solidarity that is both practical and affective. At the same time, this role reversal introduces subtle tensions and emotional complexity, as younger people become authorities in a new area, while older people must navigate this changing dynamic with dignity and, at times, vulnerability.

The Process of Digital Learning among Older Adults

Learning digital skills among older adults is far from straightforward. It is a process marked by hesitation, trial, frustration, and occasional breakthroughs. My interlocutors' stories illustrate how older adults engage with digital technologies in ways that are socially embedded and emotionally charged, often requiring sustained support and encouragement. As I have previously shown, possessing digital infrastructure and access to digital technologies does not mean that they will be included in meaningful social practices, especially when we talk about older generations. They need continuous, tailored, and sustainable support, both technical and social. In societies where there is no strong institutional support, family members, particularly the younger ones, take on the primary role in digital literacy, making intergenerational solidarity and cooperation the main source of learning digital skills (Rosales and Blanche-Tarragó 2021, 329). Thus, the process of digital upskilling for parents represents a specific aspect of intergenerational solidarity, during which younger family members provide support to older ones, either through institutional or non-institutional digital literacy initiatives.

This is exactly what a thirty-one-year-old respondent was trying to do, vividly presenting situations of learning digital skills among the parent generation. Listening to what he said, I nodded in agreement because we've all found ourselves at least once in a situation he described, talking about how he tries to make digital technologies more accessible to his parents. He described the challenges of teaching older adults:

> Explaining the most basic things to them is much harder than explaining it to someone younger. I have experience with my parents, but I also have experience with other people of their generation. Although I think there's not much difference between whether someone is older or not, it's more about the mindset – whether they're open or in the 'I'm not going to learn this' phase. You can immediately feel resistance, like 'I can't get this from the start.' But then when you sit down and explain, you see them starting to grasp it, but then they go back to, 'I'm going to forget all this, and it was pointless for you to explain it to me.' It's like a self-fulfilling prophecy. They tell you, and then it's like they're telling themselves, 'Okay, now I'll forget.' Then comes the explaining, explaining over the phone, but at one point, I started working with them... I installed a little remote software so I could access their computer, and then I'm like, 'Okay, do you see the cursor? Click here, click there, now you try.' Because when you just talk to them, explaining with words, it's impossible. Where's the left, where's this, where's that? It's not about cognitive capacities. It's literally the anxiety. And then, the more time passes, the more they get used to the phone, at some point, I literally imagine it like this – 'Aha, I've overcome the fear, now I'm going to try.' And then they open it, click on the video call camera, and then they call. I was completely shocked, like, 'How did this happen...'.

The narratives reveal how older generations acquire digital skills, demonstrating that learning is not just cognitive, but deeply social and affective. Bandura's cognitive learning theory (Bandura 1971) suggests that older adults develop new skills differently from younger people through observation and active practice in social contexts. In everyday life, this learning occurs step by step, as older family members use digital technologies together with younger relatives experimenting, observing and receiving guidance. Learning digital skills is therefore both observational and active, as older adults gradually acquire new abilities by observing and imitating younger relatives and practicing on their own so in a family setting, this process is embedded in everyday routines – practical, contextualised and emotionally supported. As a result, intergenerational relationships are strengthened, family responsibilities are shared, and mutual support is facilitated, with moments of frustration, humor, and pride included in learning digital skills.

These emotionally grounded learning experiences highlight how digital engagement shapes the evolving capacity to adapt to rapid technological change, revealing the dual cognitive and emotional dimensions of learning and leading us to another aspect of emotional engagement – technological anxiety. Technological anxiety, a fear or discomfort with new devices and systems, can lead to resistance or self-doubt, often manifesting as statements of anticipated failure or forgetfulness. The process is not only about mastering technical steps but overcoming emotional barriers. Even for those who once had a working familiarity with certain technologies, due to the rapid pace of technological development, older members of the community often struggle to keep up with all the changes, as one interlocutor noted about his father:

> As time passed and technologies developed, it became harder for him to keep up. It started to resemble an endless stream of updates, interfaces, passwords, and jargon, a tide moving faster than he could follow.

His statement reflects a broader experience of technological fatigue and obsolescence among older family members. This exhaustion was echoed in the stories of many participants, who described how their relatives felt left behind in a society that prizes innovation over continuity. Their frustration was not only with the tools themselves but with the constant pressure to adapt to new interfaces, updates, and applications. Early excitement over a new device, the first family computer, or a mobile phone, often gave way to quiet resignation as the pace of change outstripped their ability to keep up. In family settings, these moments were relational, younger relatives offered guidance and patience, while older adults navigated not just the technology but the emotional weight of shifting roles, dependency, and occasional embarrassment. Such experiences reveal that digital literacy is never a one-time achievement but a continuous, socially mediated process, requiring support, practice, and repeated negotiation within everyday life.

Individuals' Personal Motivation for Learning New Skills

Another significant aspect of intergenerational digital skills learning is personal motivation and attitudes toward technology, which significantly shape the digital learning journey for older adults. It is not sufficient to have access to digital devices and support, but one must also have the desire and confidence to engage with them. The previously mentioned technological anxiety, which refers to negative attitudes users may have toward digital technologies that are new or unfamiliar to them, can lead to a lack of willingness to learn how to use these tools. As a result, members of older generations often refuse to start familiarizing themselves with digital technologies. Several participants stressed that the willingness to learn depends largely on mindset. For example, a thirty-three-year-old interprets her mother:

> She always says 'This isn't for me!'. 'The moment she saw the screen light up, she panicked and said, 'I'll never learn this.'. She didn't even try to explore what the buttons did, she just froze, like the device itself was too foreign, too fast for her. It was as if all the years of not needing it suddenly caught up with her in that one moment. And no matter how gently I tried to guide her, her mind was already made up. She kept repeating, 'My brain doesn't work like that anymore,' or 'This is for young people, not for someone like me.' It wasn't really about the phone, it was about fear, about feeling left behind. That resistance ran deeper than the screen in front of her.

Another participant recounted how her parents, initially indifferent to technology, gradually adopted mobile phones and tried to master them. They struggled to keep up with constant updates and changes, highlighting the effort, patience, and occasional frustration involved in learning new digital tools within everyday life:

> My parents accepted it, but they can't keep up with how things are changing. My mom often asks, 'Why did my godmother disappear from Viber again?''Well, she couldn't have disappeared on her own, you must have deleted her somehow.' For us, these things are normal, but for our parents, especially the generation before them, it's like a foreign language.

These narratives illustrate how everyday digital interactions can feel alien and confusing to older adults, requiring ongoing assistance and reassurance from younger family members. The resistance often stems from anxiety, unfamiliarity, or lack of perceived relevance.

However, in many cases, motivation must prevail over the fear and discomfort, driven by emotional factors and the desire to maintain family bonds. Considering that younger generations rely more on digital technologies for communication, their avoidance of these technologies in intergenerational and family communication can represent a fragile element in family relationships. If older members do not join, they find motivation in this aspect. In this way, intergenerational family dynamics and closeness are maintained in the contemporary family environment, among family members who do not share the same living space, while also improving the quality of life for older individuals who, due to digital exclusion, may be at risk of social exclusion. One interlocutor shared a poignant reflection from her mother:

> Once, my mom said she'd like to always stay in touch with technology so that one day she could follow the lives of her grandchildren. For example, our grandmothers still have our elementary school pictures from when photos were printed, but we know we're moving more and more toward digital, and there won't be those hand-made photo albums anymore.

This statement illustrates how emotional connection and the desire to stay socially included drive older adults to persist with digital learning, even in the face of difficulties. Stories from participants show that when family interactions increasingly take place online, digital exclusion can translate into real feelings of social isolation. In these moments, the motivation to engage with technology is not just practical. It reflects a deeper wish to remain close, visible, and relevant in the lives of younger family members. The emotional part of participation in digital spaces (the ability to be seen, responded to, and acknowledged) becomes a powerful incentive for older adults to overcome initial resistance and continue learning. This includes not only access to infrastructure and digital

literacy but also interest, something shaped by individuals' attitudes toward and relationships with technology (Reisford and Rhinesmith 2020, 133). To be digitally included is to be socially included.

Shared Time Characterized by Emotional Connectedness and Closeness

In the end, digital literacy learning within families is not merely a technical transfer. It is a shared experience that often strengthens emotional bonds, as illustrated by the examples above. Moments of teaching and learning digital skills become opportunities for togetherness, shaped by patience, care, and occasional frustration, and revealing the closeness and complexity of these relationships. One participant described her role in supporting her parents during the COVID-19 pandemic, reflecting on how even small acts of guidance or repeated explanations carried emotional weight and fostered mutual connection:

> I would bring my laptop and say, 'Okay, today we're going to learn how to send an email,' and they would groan, laugh, and roll their eyes, but they always showed up. It wasn't just about learning. Those sessions became our time together. Sometimes I would explain the same thing five times, and my father would still click on the wrong thing. Then we'd both laugh, and I'd say, 'It's okay, let's try again.' You could see how proud they were, not just because they had learned something new, but because someone they loved took the time to teach them.

These interactions are woven into everyday family routines and reflect broader processes of relational negotiation. As shown earlier, in contexts where institutional support for older adults is limited, the family often serves as the primary site for digital inclusion. Younger family members act as digital mediators, bridging the gap between technology and their older relatives. In this way, intergenerational learning becomes a central channel for the transmission of digital skills. As one respondent explained:

> They mostly rely on me and my siblings because they don't trust outsiders. Even if we signed them up for courses, I doubt they'd go.

Talking about his parents' experiences and the reversal of roles in the learning process, one thirty-one-year-old interlocutor illustrated how teaching digital skills can become a deeply relational act. She described guiding her mother step by step through creating a Facebook profile, searching for information online, and navigating digital communication. In doing so, she was not merely conveying technical knowledge but participating in a continuous, delicate exchange of care, patience, and emotional labour. As one participant noted, these interactions are not merely functional, they are shared experiences that nurture emo-

tional closeness where younger family members assume the role of instructors, guiding older adults through the complexities of digital technologies. In this process, teaching mother how to navigate the internet became a shared effort that reversed traditional generational roles and created new spaces for intimacy and connection, so spending time together while learning digital skills becomes more than a pragmatic task, it transforms into a site of relational negotiation and emotional connection.

Another respondent, talking about his parents' experiences of learning, showed that these activities can be understood as shared experiences that foster closeness. While they can sometimes produce negative emotions, this actually signals the strength of the relationship, as closeness involves sharing the full range of feelings, from positive to negative, and accepting and understanding the other person with all their virtues and flaws (Jamieson 1998, 13; Reis and Sprecher 2009, 215). Reflecting on the process of acquiring digital skills, he described efforts to make digital technologies more accessible to his parents. What stood out to him was that their rigidity toward learning was not solely age-related but also shaped by personal attitudes, particularly their willingness or resistance to engage with new knowledge. This participant highlights not only the technical dimension of teaching but also the emotional labor involved, so the younger family member must be patient, nurturing, and attentive, engaging in a form of care that extends beyond instruction. In this way, teaching digital skills becomes a site for building emotional connections and mutual understanding, transforming digital literacy from a purely functional skill into a deeply relational practice.

These examples show that the success of intergenerational learning processes often depends on practical and emotional factors – having enough time, the willingness to repeat explanations, and the patience to navigate frustrations on both sides. In many households, this dynamic subtly reshapes authority and dependency, turning the digital divide into a space of both solidarity and tension, so these teaching moments are never purely functional. They carry emotional significance, requiring care, attention, and empathy, and learning together transforms routine interactions into a shared space of emotional exchange and relational negotiation, where technical guidance and affective support are inseparable.

Conclusion

The digital divide remains one of the central challenges to social inclusion and active citizenship in contemporary societies. Although many older adults now have access to digital infrastructure, access alone does not ensure meaningful engagement with digital practices, as we could see. The lack of systemic

institutional support, insufficiently tailored educational programs, and persistent technological anxiety continue to marginalize older generations within the digital sphere. In this context, the family, particularly younger members who act as informal digital mediators, plays a pivotal role in mitigating this divide.

This article provides an ethnographic perspective on how the digital divide is negotiated in everyday family life, and how intergenerational learning and solidarity serve as key mechanisms of inclusion in Serbia. Through the narratives of younger family members, the analysis demonstrates that digital technologies operate not merely as functional tools but as relational and affective mediators. Through their use emotional closeness is maintained, family ties are strengthened, and new forms of intergenerational interaction are created. In these encounters, traditional generational hierarchies are often reversed, with younger adults becoming teachers and older adults becoming students. Such inversions reconfigure the circulation of knowledge and care within families.

Addressing the digital divide, therefore, extends beyond questions of infrastructure or technical proficiency. It requires recognition of cultural, relational and emotional dimensions that shape engagement with technology in later life. Informal learning processes, rooted in observation, imitation, and shared experimentation allow older adults to acquire digital confidence through every day, meaningful practices. These include video communication, online banking, or accessing digital health services. Such situated interactions not only reduce anxiety and resistance but also foster agency, belonging, and intergenerational connection.

All this points to the fact that bridging the digital divide requires sustainable and inclusive strategies that go beyond one-size-fits-all models. Programmes that are designed should take into account the diverse experiences, learning rhythms and motivations of older people, while positioning intergenerational cooperation as a vital complement to formal education. At the same time, informal support should not replace institutional responsibility. Instead, it should be recognized and strengthened as an integral element of broader inclusion policies. Ultimately, bridging the digital divide is not just a matter of individual adaptation, but a collective social responsibility based on equality, dignity and care. Recognizing and supporting intergenerational forms of digital engagement is therefore not only a pragmatic strategy for inclusion, but also an ethical imperative, one that affirms the right of older generations to fully participate in the digital world and strengthens intergenerational cohesion through solidarity and support.

Author's Statement on the Use of One or More AI Tools

I confirm that the submitted manuscript is the result of the author's original and independent academic work, based on my own intellectual effort, analysis, and interpretation.

During the preparation of this manuscript, the author used the AI tools Grammarly and ChatGPT for translation from Serbian into English and/or the AI tools Grammarly and ChatGPT for assistance in editing to improve grammar and readability.

The author has reviewed and revised all outputs generated by these tools and assumes full responsibility for the final content of the work.

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Kada se uloge zamene: prevazilaženje digitalnog jaza kroz prakse međugeneracijskog učenja u Srbiji

Ovaj rad istražuje procese prevazilaženja digitalnog jaza među populacijom starijih odraslih u Srbiji, s posebnim naglaskom na ulogu međugeneracijskog učenja unutar porodice pri sticanju digitalnih veština. Teorijski okvir rada oslanja se na digitalni jaz trećeg nivoa, koncept međugeneracijske solidarnosti i teoriju društvenog učenja. Kroz kvalitativnu analizu narativa prikupljenih etnografskim terenskim istraživanjem među pripadnicima mlađih generacija, u metodološkom pogledu, razmatra se na koji način stariji članovi porodica usvajaju digitalne kompetencije u svakodnevnoj interakciji s mlađim pripadnicima društva – decom, unucima i drugim mlađim osobama iz neposrednog okruženja. Rad ukazuje da u kontekstima društva u kojima institucionalna podrška za digitalno opismenjavanje starijih izostaje, porodica postaje ključni prostor ne samo prenosa znanja, već i pružanja emocionalne podrške i osnaživanja. Digitalne veštine se ne stiču isključivo kroz formalne kurseve, već i kroz neposrednu praksu – posmatranjem, oponašanjem i zajedničkim rešavanjem konkretnih zadataka u svakodnevnom životu, dok se učenje odvija u neformalnim, često spontanima situacijama koje karakterišu strpljenje, empatija i poverenje. Pored funkcionalnog znanja, kroz ove interakcije razvijaju se i međugeneracijske veze, pri čemu dolazi do redefinisanja tradicionalnih porodičnih uloga – mlađi postaju *učitelji*, a stariji *učenici*. Ova promena doprinosi stvaranju novih oblika međusobne solidarnosti, povezanosti i saradnje. Istraživanje pokazuje da posedovanje digitalnih uređaja i pristup internetu ne garantuju digitalnu uključenost starijih osoba. Faktori poput tehnološke anksioznosti, osećaja nesigurnosti, negativnih stavova prema tehnologiji, kao i brz tempo tehnoloških promena dodatno otežavaju proces učenja. Ipak, kada se učenje digitalnih veština odvija u porodičnom okruženju, uz podršku i razumevanje mlađih članova, starije osobe ne samo da uspešno savladavaju osnovne digitalne funkcije, već razvijaju i osećaj pripadnosti i kompetencije u savremenom društvu. Rad naglašava da proces sticanja digitalnih veština ne treba da bude shvaćen isključivo kao tehnička veština, već i kao društvena i emocionalna praksa. U okviru svakodnevnih mikrointerakcija u porodici, digitalno učenje postaje sredstvo za očuvanje međugeneracijske povezanosti, prevazilaženje osećaja izolacije i aktivno učešće starijih u društvenom životu.

Ključne reči: digitalna uključenost, međugeneracijsko učenje, starenje i tehnologija, porodica, etnografija u trećem licu

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