Exploring Digital Media Literacy: A Case Study of Elderly Deaf Users in Slovenia

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Abstract

This study explores digital media literacy and usage patterns among elderly deaf individuals in Slovenia. Interviews with two participants revealed moderate digital literacy but limited digital media literacy, particularly in critical media consumption. The participants use social media mainly for communication and information. The findings highlight a potential relationship between digital media literacy and usage frequency, underscoring the need for tailored digital literacy training for the deaf community.

Keywords

Digital media literacy, social media literacy, deaf, social media, digital media, new media, online media platforms.

1 Introduction

In the digital age digital media play a central role in daily life, shaping how individuals access, understand and create digital content. This shift presents unique challenges for D/deaf and hard of hearing (DHH) individuals in navigating the digital landscape [1, 2]. This paper explores the digital literacy and digital media literacy of DHH individuals in Slovenia, focusing on their abilities to navigate digital media and their perceptions of digital media's accessibility. The objectives were to evaluate the level of (digital) media literacy among DHH individuals in Slovenia, and examine their experience with social media and online media platforms. By examining these aspects, the study seeks to contribute to a better understanding of how DHH individuals interact with digital media. Since the study is ongoing, this paper presents only the preliminary findings from interviews with two deaf individuals.

2 Digital media literacy

2.1 Digital Media Literacy

Digital media literacy refers to the ability to access, understand and create content using digital media [3]. These skills are essential in the information age, where rapid technological advancements demand constant adaptation and learning [4]. Digital media literacy involves not only technical skills, but also includes emotional response, consumption and cultural evaluation of media content [3, 5].

With social media becoming a key source of information for many, the importance of social media literacy increased. These platforms became a popular way of spending free time, places for socialisation and communication with others in a personal or business environment [6]. Digital media usage has also shifted from desktops to mobile devices and tablets, changing the user experience, frequency and mode of use [7, 8].

2.2 Indicators of Digital Media Literacy

Digital media literacy involves four main areas: critical consuming, critical prosuming, functional consuming and functional prosuming [9]. Critical consuming includes the ability to analyse, synthesise and evaluate media content [5]. Critical prosuming involves interactive participation and critical content creation in new media environments, such as chatrooms. The individuals' critical abilities are exhibited in their understanding of social and cultural values [10, 11]. Functional consuming refers to technical skills in using media content, such as navigating the internet and using various digital devices [9, 12]. Functional prosuming includes the technical skills needed for content production and distribution, such as creating and sharing photos and videos on social media [12].

3 DHH in the digital media

3.1 Statistics on DHH Individuals

In Slovenia there are approximately 1,500 deaf people and around 50,000 hard of hearing individuals, according to the Association of the Deaf and Hard of Hearing of Slovenia [13]. The European Union of the Deaf (EUD) reports further that around 1,850 individuals in Slovenia identify as deaf, and 1,000 of them use Slovenian Sign Language [14].

3.2 Communication Habits of DHH Individuals

Communication among DHH individuals involves primarily the use of sign language, with Slovenian Sign Language being recognised officially and protected by law [15]. The right to use sign language includes access to interpreters and information through adapted techniques, ensuring inclusion in social and professional environments [16, 17]. In addition to sign language, DHH individuals use written text and visual aids to facilitate communication, particularly in digital contexts. Video calls via platforms (e.g., Skype, Teams and Zoom) have become essential, especially during the COVID-19 pandemic, enabling real-time visual communication [18].

3.3 Habits of Using Digital Media

DHH individuals use digital media increasingly for various purposes, from social interaction, information access to entertainment. Research indicates that DHH users use social media platforms frequently to connect with their community and share experiences [19, 20]. DHH users particularly value video content with subtitles, text transcriptions or sign language for improved understanding. The shift to digital media has also seen a rise in the use of mobile applications tailored to DHH needs, such as those for real-time captioning and sign language interpretation [21, 22, 23].

3.4 Challenges in Using Digital Media

Despite many benefits, DHH individuals also encounter challenges in the digital environment. Accessibility is a common issue, as many digital platforms lack subtitles or sign language features [24, 25]. This can lead to social isolation and exclusion from mainstream digital interactions and content [26, 27]. Similar constraints arise in everyday occasions, such as public speeches, often conducted without an interpreter, and official information delivered to individuals via phone calls, posing significant barriers for DHH individuals. Another significant challenge is the lack of digital literacy training tailored to the DHH community, such as those in sign language [28].

4 Methodology

4.1 Procedure

This case study examines two DHH individuals in Slovenia, who were recruited through Associations of DHH people. The inclusion criteria were (a) Identification as a DHH individual, (b) Membership in associations of DHH people, (c) Active use of at least one social media platform, (d) Use of online media platforms, e.g., dostopno.si. We collected data using semi-structured joint interviews, providing a holistic view and direct observation of the participants` interactions [36, 37]. A sign language interpreter was present to ensure accurate communication and provide additional support and information. The interview took place at the Association of the Deaf and Hard of Hearing of the Podravje, Maribor unit, and was audio-recorded to facilitate the analysis of the interpreter's translation. The data were later transcribed and analysed according to Roblek [39].

4.2 Research Questions

The study focused on two main research questions:
(1) What is digital media literacy among elderly deaf individuals?
(2) How do elderly deaf individuals use digital media?

4.3 Participants

The interviewees were two deaf individuals residing in Slovenia, who belong to the group of elderly people aged 60 years or older. They were selected randomly from a larger sample of 12 participants, to present the preliminary results of the ongoing research study. Participant 1 (P1) is a 63 year old female with a hearing loss level of 96 dB. Her educational level is lower or vocational secondary. Participant 2 (P2) is a 60 year old female with a hearing loss level of 100 dB, and has primary school education. Both participants lost their hearing early in life and their primary language is Slovenian Sign Language.

4.4 Measuring Instrument

The measuring instrument consisted of several parts. Prior to participation, the participants were questioned on their demographic data (gender, age, education level), followed by data on their hearing loss (level of hearing loss, primary language, hearing loss history). Next, the participants were questioned on their use of digital media (social media and online media platforms). This part consisted of questions on their purpose of use, content creation, frequently encountered content and frequency of use.

The next section examined digital literacy [29, 30], digital media literacy [31, 32], and literacy about social media [33]. Lastly, the participants were also asked about their perception of the accessibility of digital media for DHH, as proposed by Maiorana-Basas & Pagliaro [34] and Kožuh & Debevc [35].

5 Results

5.1 Digital Media Literacy Among Elderly Deaf Individuals (RQ1)

Both interviewees demonstrated a satisfactory level of digital literacy. P1 uses only a phone, while P2 uses a computer and tablet, with a clear preference for the phone. Both have been using digital devices for years, learning about them informally. P1 learned to use them about 10 years ago with a partner's assistance, and P2 15 years ago with her son's help, and, later, at work. Neither expressed a desire to improve their digital literacy, believing their current skills were sufficient for their needs. Both rely on others for help when encountering difficulties (e.g., suspected money fraud), with P1 turning to her partner and P2 consulting an interpreter.

Both interviewees also follow traditional media, either television or newspapers. While critical thinking skills are a crucial part of media literacy, it is concerning that neither verified the veracity of the online content. P1 typically relies on acquaintances to check veracity, and has occasionally clicked on fake news due to its attractive content, though she did not share it. She mentioned, "I can tell when it is fake news". P2 is more suspicious of online content and fears internet scams, as

indicated by her concern about the dangers of Facebook: "There are more and more of these scams". Neither participant demonstrated an understanding of media bias and political influence on media impartiality.

Social media literacy was examined in regard to the proficiency in navigating the Facebook application. P2 showed a significantly greater proficiency, as she could navigate the main features (post, comment, share) with more ease and independence, but also caution. In contrast, P1 required more time, and showed some confusion, asking P2 for help in learning to post stories. Both participants acknowledged the positive impact of social media platforms on maintaining relationships and staying informed.

5.2 Use of Digital Media by Elderly Deaf Individuals (RQ2)

Both interviewees use social media platforms frequently, mainly in the morning. Occasionally, they access them multiple times a day. They both use Facebook, Facebook Messenger and WhatsApp, while P2 also uses Instagram and Imo. They use social media to browse content, communicate and interact with posts from other users, particularly those featuring gestures in photos or videos. One example is the travelling videos from fellow deaf individuals, which P2 finds interesting, and understands due to international gestures. Their primary reasons for using social media platforms are entertainment and staying updated with current events in their hometown. P2 also uses social media platforms for direct communication and occasional posting, such as photos and videos/stories of interesting things. Contrarily, P1 does not publish her own content.

The interviewees follow Slovenian online media portals, including rtvslo.si, dostopno.si, and 24ur.com, with P1 also using zurnal24.si. P2 also follows foreign, mainly Croatian, portals displayed in her Facebook feed. They access these portals once a day, usually in the morning, and seek mainly for information, but also entertainment. Both access online media content through social media platforms rather than direct searches. The content they typically encounter is genre-specific, including news, culture, entertainment, sports and arts. When asked about the media portal dostopno.si, a portal for people with disabilities, both expressed familiarity with it and past use, as they require the presence of an interpreter to understand the content.

The interviewees were also asked about the accessibility and adaptation of the said social media platforms and online media portals for the needs of deaf people, which they both agreed were sufficient. Nevertheless, P2 has had difficulties with verbal communication, as she finds it difficult or impossible to understand speech without gestures.

We observed that neither participant understood the importance of media impartiality. They also failed to avoid fake news, often clicking on links and reading the content (for P2 there is a possibility that she would believe the content). When asked about information, neither of them checks information from different online media sources. They do ask acquaintances about the veracity, but even they cannot know for sure if a certain piece of information is really accurate. The fact that the interviewees do not seek out media content intentionally, but only access it via social media platforms, might also contribute

to their lower media literacy. This leads us to conclude that the interviewees might not think critically, and we might therefore classify their digital media literacy as lower. Their lack of understanding of it does not bother them, nor do they wish to improve their digital media literacy. We believe that they may be compelled to use social media platforms (e.g., WhatsApp, Facebook Messenger) and to follow the online media portal dostopno.si, as they cannot communicate or inform themselves otherwise, no matter how well they understand digital media.

6 Discussion

To assess the interviewees' digital media literacy, we focused on answering two Research Questions. Both participants have exhibited a moderate level of digital literacy (RQ1). Despite their age and long-term hearing loss, they adapted to using digital devices and social media platforms, learning informally through family members and work experiences. However, they lacked critical thinking skills, a key component of media literacy. Neither of the interviewees verified the accuracy of online content, indicating a gap in their digital literacy abilities. It is important to note that the primary language of both interviewees is Slovene sign language, while social media platforms and most online media portals are based on text-based communication. An exception is the online media portal dostopno.si, which the interviewees know, and use mainly because the video content has an interpreter subtitling and transcripts.

Both interviewees are active users of social media platforms and digital media platforms (RQ2). They use social media platforms frequently (e.g., Facebook, WhatsApp) and mobile apps for communication (e.g., Imo). They use it for browsing content, communication, and interacting with posts, especially those that include images and videos with gestures for better understanding. There was a notable difference in content creation habits, as one participant frequently published her own content and the other avoided such behaviour.

Following these findings, the connection between the use of digital media and digital media literacy is unclear. Although both interviewees were cautious in using social media, they exhibited different levels of proficiency. P2, who shows higher digital literacy, engages more actively and confidently with digital media, creating and sharing content regularly. She is proficient in using multiple devices and platforms, indicating a higher level of digital literacy compared to P1. In contrast, P1's lower engagement and more passive consumption of digital media reflect her more limited digital literacy. Both interviewees follow various online media portals for information and entertainment, accessing content primarily through social media platforms rather than searching for it.

Based on Lin et al`s (2013) indicators of digital media literacy, both interviewees fall into the functional category. Neither can be classified as critically consuming or critically prosuming, although P1 exhibits some skepticism towards fake news. Both possess the technical skills necessary for functional consuming, with P1 proficient in using a phone, the internet and social media platforms, and P2 is also competent with a computer and tablet. P2 additionally fits into the functional prosuming category, due to her active content creation on social media platforms. Despite initial help from family members, she now

shares photos and videos independently, underscoring her functional literacy.

Apart from the small sample size, an important limitation of this study are potential misunderstandings due to the presence of an interpreter during data collection. This may result in misinterpretations of expressions between the interviewees and the interviewer.

7 Conclusions

Our study reveals that digital media literacy is crucial in using digital media effectively. The interviewees' limited digital media literacy led to less critical and cautious use of digital media. This study identified the social media platforms and online media portals they use, as well as their reasons and ways of use. The most important reasons for using them were communication, entertainment, and information. We found that higher digital media literacy may increase their presence in the digital environment, as well as enhance their understanding of digital devices and media.

Acknowledgments

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