

## PAPER

# Bridging the Digital Divide: Leveraging Social Media for Enhanced Corporate Learning and Digital Literacy Among Older Adults

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Katowice, Katowice, Poland[l.ochoa@awf.katowice.pl](mailto:l.ochoa@awf.katowice.pl)**ABSTRACT**

This paper addresses the innovative strategies adopted by the DigIN project in order to increase digital literacy among adults aged 55 years and above using social media platforms, particularly YouTube and Spotify. The project will create an active learning community by sharing relevant educational content tailored to meet the needs of older learners. Analytics gathered data from all platforms, showing key performance indicators, including views and engagement rates and insight into demographics. Preliminary findings indicate high engagement; for example, on the YouTube channel, there were 2120 views and a total of 42.9 hours of watching time, with 42% of viewers falling into the age group 55–64. What is more, those podcasts published on Spotify were highly rated, especially among Polish speakers, thus proving great interest in digital competencies locally. Results prove that social media can be quite a useful tool for corporate learning and human resources development, with the aim of singling out the need for tailored content, taking into consideration peculiar challenges that, in general, arise while teaching older adults. The implications, therefore, for future corporate training initiatives lie in the use of social media to create learning environments that empower underserved populations and, by extension, increase their independence and overall workforce competency.

**KEYWORDS**

digital literacy, social media engagement, older adults, corporate learning, digital inclusion

## 1 INTRODUCTION

The digital divide is an important issue of unequal access to information and opportunities, especially among older adults [1]. The digital divide is defined as unequal conditions with respect to access to the digital technologies and competencies needed to use them effectively [2]. It points out the differences between the older generations and their younger counterparts. Reports say that older adults make

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less use of online platforms and ownership of smartphones, thus closing them off from several benefits that come with access to essential services, social interaction, and learning opportunities [3]. The gap has now grown into a chasm in society, increasing its dependence on digital communication and online services. Targeted interventions aimed at improving digital literacy among the elderly population are crucial to encourage active engagement with technology and ensure they can be fully included in the contemporary digital economy [4].

The modern workplace has placed digital literacy among the key competencies that play a very important role in employability and the chance of career progression. Employers across a wide range of employment sectors demand the ability to navigate online platforms, effective communication through digital channels, and a good level of proficiency in using a variety of software tools [5]. Research proved that increasing digital literacy in older workers raises job performance and satisfaction and increases their confidence levels in using technology. Therefore, programs aimed at increasing digital skills are vital for the empowerment of older adults and for their successful inclusion in the labour market [4], [5].

The DigIN Project, an initiative under the Erasmus+ program, seeks to empower adult educators in fostering digital social inclusion among individuals aged 55 and older [6]. By leveraging various social networks, the project aims to inspire and support educators while promoting active citizenship within this demographic through a digitised community. It is quite interesting to note that the challenges that the DigIN Project realises and respects toward older learners include being deprived of accessing digital tools and having lower levels of digital confidence. In addressing these challenges, this project takes a multidimensional approach to developing learning materials that will guide older adults through digital environments. The DigIN Project aims to support educators in achieving a sustainable and inclusive environment that will improve digital literacy among older adults [6], [7].

This study will explore how social media strategies employed within the DigIN project can effectively bridge the digital divide for older adults and improve their engagement with technology. The research will investigate critical questions regarding the extent to which social media platforms contribute to enhancing digital literacy among this demographic and identify effective methods for reaching older learners [8]. Ultimately, this research aims to inform best practices for leveraging social media in corporate learning and human resource development, thereby contributing to broader efforts aimed at promoting digital inclusion for older populations.

## 2 BACKGROUND OF THE STUDY

The digital divide is a modern-day concern in which older adults are impacted simply because they lack the technology and the skills needed to function in this landscape; however, there is some hope that can be offered to bridge this gap via social media [2], [9]. As society increasingly moves to digital communication and online services, older adults are encountering significant barriers that limit their full participation in educational opportunities, employment, and social activities [5], [10]. It is estimated that people 55 years of age and older are less likely to use digital technologies than any other generation, leading to increased feelings of isolation. They are the most vulnerable demographic because this generation may have limited early exposure to modern technologies; hence, it may reveal the severe digital skill gap that requires targeted interventions for mitigation [11].

Digital literacy is not only a means of personal development but is also widely considered a factor in employability and career advancement opportunities within contemporary workspaces. Most importantly, employers increasingly require graduates who can use technologies in effective communication, collaboration, and problem-solving ways [12]. In the case of the elderly, such skills are relevant and mean survival within a rapidly changing job environment. Accordingly, digital literacy among older workers will improve job performance and job satisfaction [5], [7], [10]. In this respect, it is not only timely but also necessary to consider policies that would enhance the use of digital skills among older people for their own empowerment and full integration into the workforce [13], [14].

It mainly focuses on the facilitation of adult educators in the process of digital social inclusion with active participation by citizens aged 55 years and over, though the project DigIN will use only social media and will create educational content targeted at or appealing to older learners to involve this age group in practical activities [7], [15]. The DigIN project has provided resources that enhance digital competencies while fostering a sense of belonging through the creation of an engaging online community. The many facets of this project, including the development of instructional materials that address practical challenges older adults face in navigating digital environments, have inspired and motivated similar initiatives [6], [7], [15].

This paper has explored how the DigIN project's social media strategies are effectively bridging the digital gap for older adults. The effect of such a strategy on the improvement of digital literacy and engagement in this elderly demographic was examined [6], [16]. The key research questions that guided this study, which have been adequately covered, include:

- To what extent are social media platforms effectively promoting digital literacy among older adults?
- What are the precise strategies that have worked to engage this audience?

The above questions will be of much value to the best practices for leveraging social media in corporate learning and human resource development.

### 3 PURPOSE AND SIGNIFICANCE OF THIS RESEARCH

This study examines the efficiency of the social media strategies implemented in the DigIN project, an innovative program focusing on adults aged 55 and above. Given the increasing use of social media platforms in everyday life, it's very important to know how best to engage the older adult population [17], [18]. This article focuses on how tailor-made content delivered on digital platforms such as YouTube and Spotify might enhance the digital competencies of older adults, enabling greater confidence and skill in their online engagements.

Through the analysis of engagement metrics, viewer demographics, and user feedback, this research tries to identify best practices for using social media in corporate learning and human resource development. The findings go beyond the specific results of the DigIN project and will be of value to broader efforts to promote digital inclusion among older populations [4], [18]. The DigIN project shows that it is especially difficult for older adults to access and use digital technologies, thus being cut off from essential services. This paper turns to social media as a possible platform for hosting educational content intended to enhance digital literacy among the older adult population.

Such findings bring serious implications for organisations with aims at implementing inclusive corporate learning initiatives encompassing all workers, regardless of age [6]. This article thus bridges the noticeable gap in the current literature concerning this intersection: how social media and adult education congregate. An overwhelming majority of the related prior studies dealing with digital literacy initiatives lack singling out and critically questioning how the proposed social media interventions actually engage adults in learning activities. Building on empirical material from the DigIN project, this article will explore practical approaches to improving digital skills among older learners for educators, corporate trainers, and policymakers [19].

All in all, this research points out the requirement for better digital literacy among older adults and what it could bring to corporate learning practices. By fostering an inclusive learning environment where all staff members are empowered through continuous learning via social media platforms, this study aims to inform future efforts aimed at closing the digital divide with optimism regarding the future of digital literacy initiatives within diverse workplaces.

This study also significantly contributes to ongoing discussions regarding digital inclusion and the role of social media in enhancing digital literacy among older adults. Barriers often impede older individuals' engagement with technology as it evolves rapidly; thus, this research addresses these challenges by evaluating the effectiveness of social media strategies employed within the DigIN project aimed at empowering those over 55 years old [6], [12], [17]. This puts an extra focus on suitable educational interventions toward bridging the digital gap in addition to broader involvement in the digital economy [20].

As organisations increasingly adopt technology in their communication and operational processes, their employees face the growing pressure to get acquainted with a mushrooming list of digital tools and platforms. Enhancing the digital competencies of ageing workers alongside fostering a more inclusive workplace culture represents effective strategies for improving individual performance within companies. Empirical results confirm that social media serves as a potentially effective mechanism for delivering content that supports learning in later life while enabling engagement among this demographic group [21].

Extending educational opportunities to underrepresented groups—including third-age learners—aligns with broader societal policies concerning ageing populations. By equipping older adults with relevant skills, they can compete effectively within today's technological landscape; many remain active in the workforce longer than other generational cohorts. The findings from this research will educate policymakers and educators on best practices that can advance targeted initiatives aimed at enhancing digital literacy among older adults over time [22].

This will eventually fill a critical gap in the existing literature on the role of social media in adult education and inform future initiatives designed to bridge the digital divide through innovative educational approaches utilising these platforms. The insights derived from this research will go a long way toward fostering inclusion within an increasingly digital world by addressing challenges faced by specific demographics while creating inclusive learning opportunities across all age groups.

## 4 PROBLEM STATEMENT

The digital divide is a great and serious challenge to modern society, especially since most older adults lack either technology or the skills needed to navigate the digital landscape. With the increased integration of digital technologies into

daily life, older individuals face considerable barriers to accessing key services, educational resources, and social interactions online. According to the Pew Research Centre [23], older adults are less likely than younger generations to use the internet or own smartphones, which could lead to feelings of isolation and exclusion from critical aspects of modern life. The less involvement of this category of age group with technology has its impacts, which affect not only personal lives but also employability and full involvement in the workforce, hence requiring urgent targeted interventions for increasing digital literacy among the elderly population.

The DigIN project was therefore developed to meet this challenge and to prepare adult educators for their role in the promotion of digital social inclusion of people aged 55+. To that end, the project used YouTube and Spotify, amongst other platforms, to share accessible learning materials targeting the learning needs of older learners [24]. However, notwithstanding these noble objectives of this project, there still remains an empirical lacuna in the evidence concerning how those social media strategies effectively enhance digital literacy for the elderly. Past studies generally discussed broader aspects of the theme of digital inclusion but barely touched on how such particular platforms can successfully appeal to that demographic group in the target. It is, therefore, important to establish how social media use can effectively promote digital competencies among older adults and bring about community [25], [26].

This paper addresses this gap by exploring the effectiveness of the social media strategies adopted in the course of the DigIN project. Some of the research questions that have guided this study include: To what extent might social media platforms influence the level of digital literacy among older adults? Which of the strategies have been effective in attracting this target group? It is against this background that the research work hopes to bring out, through these questions, certain best practices for leveraging social media in corporate learning and human resource development [7], [19].

The problem statement encompasses the difficulties older adults face in both accessing and utilising digital technologies, bringing into focus the importance of targeted educational initiatives. The DigIN project targets social media to raise digital literacy and provides an opportunity to narrow the digital divide and enhance the confidence of older persons in mastering the challenges brought about by the digital world [6], [17]. Empirical research about such problems will result in a series of academic discussions and the development of practical strategies related to issues of the inclusion of people within an increasingly digital civil society.

## 5 METHODOLOGY, DESIGN, AND STRATEGY

The methodology of the study is a systematic evaluation of the effectiveness of the social media strategies used in the DigIN project, with the goal of improving digital literacy among older adults [27]. A mixed-method approach is followed, covering both the quantitative and qualitative methods of data collection, to have an in-depth understanding of the impact of the project on its target demographic. These are represented mostly through YouTube and Spotify analytics, complemented by user feedback in the form of surveys and comments. This multi-method approach allows for a nuanced analysis of how social media can appropriately bridge the digital divide for older adults. During the period under analysis, views of the YouTube channel summed up to 2120, with 42.9 hours of viewing time, and it gained 42 new subscribers, meaning that the project's content was increasingly interesting. The most viewed video, titled "Digital Competences – Problem Solving," sums up to 430 views and 18.4 hours of viewing time, proving to be highly relevant and useful for older learners.

In addition to YouTube metrics, Spotify podcast analysis included total plays, listener ratings, and demographic breakdowns. The podcasts received a total of 121 listens, with notable engagement from listeners aged 45 and above; 45.5% of listeners were women. The most popular podcast catalogue was “Journey into Digital Competencies”, with 11 observations.

Audiences will be analysed through both qualitative and quantitative assessments of viewer engagements and further insight into demographics. Quantitative analysis will also consider statistical measures regarding likes, shares, and comments, as well as the average watch times across all platforms. Notably, YouTube viewership statistics—about 62% of recorded views—come from unsubscribed viewers, which delineates the fact that this channel manages to reach a new audience. This level of engagement does seem indicative of how effective social media interventions are at promoting digital literacy among older adults with targeted educational content.

This methodology will, therefore, seek to enable the derivation of useful insights on best practices in using social media in corporate learning and human resource development, in consideration of the unique challenges faced by older adults in digitally mediated environments. These findings are very likely to contribute significantly to helping the efforts at digital inclusion aimed at this demographic [27], [28].

## 6 RESULTS

Analysis of the social media platforms associated with the DigIN project offers critical insights into key performance indicators, audience demographics, and engagement levels of the content delivered. The primary objective of the program was to enhance digital literacy within the 55+ age group, and the data obtained from YouTube and Spotify indicates that targeted educational strategies have had a significant impact.

**Table 1.** Comparative analysis of YouTube and Spotify metrics for the DigIN project

Metric	YouTube	Spotify
Total Views/Listens	2120	121
Total Watch/Listen Time	42.9 hours	Not specified
Audience Age Demographics	42% of viewers aged 55–64	27.3% of listeners aged 45+
Engagement	Average viewing time for subscribed viewers: 1 minute, 6 seconds Average viewing time for unsubscribed viewers: 1 minute, 16 seconds Video: “How to Use the DIGIN Learning Platform – A Step-by-Step Guide” received 19 likes and one positive comment.	All podcast directories received 5-star ratings. The most popular catalogue is “Journey into Digital Competencies” (English), with 11 observations.
Most Popular Content	Video: “Digital Competencies – Problem Solving” (430 views) Playlist: “Podróż po pozycjonowanie sieciach Cyfrowych” (Polish) (155 views)	Podcast Catalogue: “Journey into Digital Competencies” (English) (11 observations)

Table 1 shows YouTube’s impact. The YouTube channel developed under the project DigIN is an important place for sharing Digital Literacy. During the review period, it attracted 2120 views, equalling 42.9 hours and gained 42 new subscribers, indicative of growing interest in the offerings available through the project. The most viewed video was “Digital Competencies – Problem-Solving”, with 430 views,

generating 18.4 hours of watch time and thus proving relevant in solving the needs of its viewers. Views from unsubscribed users are 62%, which could suggest that the channel is good at reaching new audiences who are in the early stages of exploring digital literacy resources.

Demographic analysis shows that 42% of the audience was in the age group 55 to 64 years, which contributed strongly to total viewing time and accounted for an average of 42.2% of total engagement. Moreover, these viewers watched an average of 48.1% of each video, showing a high interest in the information being presented. Data also showed that subscribers represented about 38% of total views, suggesting a loyal viewer base regularly engaging with the channel's content.

In addition to YouTube metrics, the DigIN project published five podcast directories on Spotify, which collectively received 121 listens. The most popular playlist was titled "Podróż w kierunku kompetencji cyfrowych" (Polish), with 155 views, indicating strong interest in localised content. The second most popular playlist, "Journey into Digital Competencies", in English, with 105 listens, reflects engagement among diverse linguistic audiences.

Demographic insights show that 27.3% of listeners were 45 or older; breakdowns by bigger segments are as follows: those in the age band 45–59 comprise 9.1%, and those 60+ comprise 18.2%. Interestingly enough, a whopping 21.2% didn't provide any information related to their age, meaning the number could be considerably higher.

The outcomes of user engagement further solidify the effectiveness of the social media strategies implemented by the DigIN project. For example, the video "How to Use the DIGIN Learning Platform – A Step-by-Step Guide" attracted views from 101 unique viewers, where it was commented on and liked for its usefulness in giving tips on how to use the DIGIN website.

From this research, there might be a clear overall trend showing that if it actually becomes more usable and interesting by adding learning material tailor-made to their needs, social media really will be able to improve digital literacy among the older adult population. This study will use the insights learned to inform continuing efforts in bridging gaps in using digital media and fostering a culture of continuous learning within diverse populations.

In the final analysis, while the DigIN project was able to demonstrably achieve greater reach through its YouTube channel compared to its Spotify podcast directories in terms of total views/listens, both platforms did succeed in engaging their target audiences. More research would be needed to identify which of these two platforms is more effective at disseminating educational content related to digital literacy.

## **7 INTERPRETATION OF RESULTS TO THE OBJECTIVES OF THE DIGIN PROJECT**

The results from the DigIN project strongly support the hypothesis that social media works effectively as a promoter of digital literacy among older adults and very much falls under the goals stated in the project. Data retrieved from both YouTube and Spotify shows a relatively high level of activity from the target group, especially for people 55 years old and above. For example, the YouTube channel garnered a total of 2120 views, along with 42.9 hours of watch time, with 42% of the viewers aged 55–64. The statistics imply that the project successfully brought about an enabling learning environment to which older adults can respond.

The high level of engagement with the content, with a peak in the video "Digital Competences – Problem Solving" that reached 430 views, evidences that created

content is perfectly suited for an older adult audience's special needs [29]. This will fulfil the aim of the project: to give this population digital empowerment by making relevant learning materials easily accessible.

It also demonstrates the potential of social media to participate in the reduction of the digital divide among older adults. Most of the older adults in previous Pew Research Centre studies have been seen to face many difficulties while accessing technology, which impairs their use of digital platforms [30]. The DigIN project responds to these challenges by providing resources that will enhance the digital competencies of all participants and create a sense of community. Noting that 62% of YouTube views were by those not subscribed, it highlights the reach the project managed to hit in terms of unfamiliarity with the presence of digital divides within new audience segments, underlining in their way lifelong learning objectives that ensure there are sufficient involvement in public domains that are becoming increasingly digitised. The implications of these findings carry into corporate learning environments and human resource strategies. As organisations come to realise the critical importance of acquiring new, digitally-based skills for workforce development, the adoption of social media-based training programs can catalyse employee interest and involvement. The DigIN project demonstrates how organisations can use social media to create inclusive training initiatives that address the diverse needs of employees.

Such positive ratings, especially the nine 5-star ratings for the Polish-language podcast, speak to the growing appetite for content that is culturally appropriate. It would, therefore, have implications in how curricula should be realigned by any training institution within the context of its workforce diversity to become more relevant and engaging.

While these results are encouraging, there are some limitations. First, the use of self-report data may introduce social desirability bias, in which case people may give overly positive ratings. Another large portion of Spotify listeners (21.2%) did not report their age, which complicated the demographic analysis and might obscure insights about the engagement of the audience among older adults.

Future research should attempt to overcome these limitations by employing more robust methodologies, such as longitudinal studies tracking user engagement over time or employing mixed-methods approaches that combine quantitative metrics with qualitative interviews. Equally, extending the scope to other social media platforms like Facebook or Instagram may provide insights into how different channels impact learning outcomes for older adults. More importantly, this will help to explore the different formats—video tutorials versus podcasts—on learning outcomes.

The final analysis shows how the DigIN project can illustrate social media as a good facilitator for the improvement of digital literacy among seniors. It has clearly been indicated that the use of tailored educational content results in very effective levels of engagement and community building, bearing important implications for corporate learning strategies aiming at ensuring inclusion in the fast-evolving digital workplace.

## 8 CONCLUSION

The results of the DigIN project have clearly shown how social media could be used to improve older adults' digital literacy and help overcome some of the most crucial barriers related to the digital divide—namely, access and digital skills. The project reached its target group very effectively on both YouTube and Spotify, with a total of 2120 views on YouTube and 121 listens on Spotify. Notably, 42% of YouTube viewers

were aged 55–64 years, meaning the project was very successful in reaching a group often overlooked. Indeed, some content proved extremely popular—for example, “Digital Competences – Problem-Solving” with 430 views—thus underlining the importance of providing tailored educational materials that really respond to the needs and interests of older learners.

The findings are important for policies and initiatives of digital inclusion in that they provide empirical evidence that well-developed social media interventions can create greater engagement among older adults in learning opportunities. Creating communities and facilitating access to resources, the DigIN project created a context in which social media use brings positive outcomes in increased digital competencies. It complements broader initiatives to get people of all ages equipped with the skills needed in a constantly changing digital world.

The study also emphasises the potential of social media for fostering a culture of continuous organisational learning. With the platforms on which many users are already familiar, organisations can meet a variety of employee needs in a single cohesive training environment. Positive responses to many of the podcasts—for example, nine 5-star ratings for the Polish-language directory—suggest a growing demand for culturally appropriate content that resonates with particular audiences. Thus, companies now incorporate social media-based training programs that offer a more active and interactive learning process.

In all, the DigIN project gives a model of how social media can be used to increase digital literacy among older adults, thus preparing them with the necessary skills and building up an inclusive society where every person, irrespective of age, can express themselves completely in the digital world. This effort should continue with innovation in the use of social media for educational purposes to make sure the benefits of digital literacy reach all segments of the population and further fortify our collective digital community.

## 9 RECOMMENDATIONS

Here are some recommendations of the DigIN project to improve social media strategies that could better digital literacy among older adults. The following suggestions will be given: optimisation of content delivery, expanding audience reach, and fostering community engagement.

From the data, it is obvious that the target group is really interested in practical guidance videos. For example, the video “How to Use the DIGIN Learning Platform – A Step-by-Step Guide” was heavily viewed and commented on in a very positive way. Another suggestion, therefore, would be to go ahead and make more content that combines theoretical knowledge with practical tutorials focusing on common challenges that older users face on digital platforms. Interactive elements, like quizzes or live Q&A sessions, can further be integrated to increase viewers’ engagement and retention.

Given that 42% of YouTube viewers fell between the ages of 55–64, focused marketing plans should be made to specifically target this age group. It may be in the form of optimizing the title and description of videos to be more visible on YouTube searches and thus be discovered by older people. The use of analytics to understand demographics and viewership patterns will help in building more effective outreach efforts.

This is further illustrated by the success of the Polish-language podcast, which received nine 5-star ratings. That means inclusivity would imply more offerings in multiple languages and tailoring of the resources to meet the preferences of the

diverse cultural groupings. Collaboration with local community organisations in identifying relevant topics helps to ensure the material will resonate with target audiences.

It's crucial for the sustainability of interest in digital literacy programs to build a dynamic community of participants. Sharing user-generated content—like participants' testimonies or success stories—can act as strong motivators for others. Establishing online forums or social media groups where users can communicate, ask questions, and share advice will enhance community building and support ongoing learner needs.

A strong evaluation framework is necessary to provide an assessment of the effectiveness of the social media strategies over time. Regular analysis of engagement metrics and user feedback will help make timely adjustments in content and outreach strategy, keeping the DigIN project on its toes regarding evolving needs of older adults in this fast-changing digital landscape.

It will also have a greater effect in enhancing digital literacy among the elderly by following these recommendations adopted in the DigIN project. These strategies aim to create an inclusive learning environment that empowers individuals with the confidence and skills necessary to navigate the complexities of digital technology effectively. Ultimately, these efforts will contribute to bridging the digital divide and fostering a more digitally literate society where older individuals can thrive.

## 10 REFERENCES

- [1] H. Tinmaz, Y. T. Lee, M. Fanea-Ivanovici, and H. Baber, "A systematic review on digital literacy," *Smart Learning Environments*, vol. 9, no. 1, p. 21, 2022. <https://doi.org/10.1186/s40561-022-00204-y>
- [2] L. Robinson *et al.*, "Digital inequalities and why they matter," *Information, Communication & Society*, vol. 18, pp. 569–582, 2015. <https://doi.org/10.1080/1369118X.2015.1012532>
- [3] P. Reddy, K. Chaudhary, and S. Hussein, "A digital literacy model to narrow the digital literacy skills gap," *Heliyon*, vol. 9, no. 4, 2023. <https://doi.org/10.1016/j.heliyon.2023.e14878>
- [4] D. Peng and Z. Yu, "A literature review of digital literacy over two decades," *Education Research International*, vol. 2022, no. 1, p. 2533413, 2022. <https://doi.org/10.1155/2022/2533413>
- [5] D. Cetindamar, B. Abedin, and K. Shirahada, "The role of employees in digital transformation: A preliminary study on how employees' digital literacy impacts the use of digital technologies," *IEEE Transactions on Engineering Management*, 2021.
- [6] Erasmus+, *DigIN Project: Empower Adult Educators to Support Digital Social Inclusion*, 2022. Retrieved from <https://erasmus-plus.ec.europa.eu/projects/search/details/2022-1-PL01-KA220-ADU-000088404>
- [7] DigIN Consortium, "Journey to digital proficiency (Version 1)," Instytut Badan i Innowacji w Edukacji, 2024. <https://doi.org/10.5281/zenodo.10973351>
- [8] K. E. Siregar, "Increasing digital literacy in education: Analysis of challenges and opportunities through literature study," *International Journal of Multilingual Education and Applied Linguistics*, vol. 1, no. 2, pp. 10–25, 2024. <https://doi.org/10.61132/ijmeal.v1i2.18>
- [9] B. Arafah and M. Hasyim, "Social media as a gateway to information: Digital literacy on current issues in social media," *Webology*, vol. 19, no. 1, pp. 2491–2503, 2022. <https://doi.org/10.14704/WEB/V19I1/WEB19167>

- [10] S. Nikou, M. De Reuver, and M. Mahboob Kanafi, “Workplace literacy skills—how information and digital literacy affect the adoption of digital technology,” *Journal of Documentation*, vol. 78, no. 7, pp. 371–391, 2022. <https://doi.org/10.1108/JD-12-2021-0241>
- [11] J. A. Jackman, D. A. Gentile, N. J. Cho, and Y. Park, “Addressing the digital skills gap for future education,” *Nature Human Behaviour*, vol. 5, no. 5, pp. 542–545, 2021. <https://doi.org/10.1038/s41562-021-01074-z>
- [12] L. Ochoa Siguencia, “Digital Social Inclusion in Adult Education: Strategies for Empowerment and Sustainability (Version 1),” Instytut Badan i Innowacji w Edukacji, 2024. <https://doi.org/10.5281/zenodo.14211986>
- [13] I. Hecker, S. Spaulding, and D. Kuehn, “Digital skills and older workers,” *Urban Institute*, vol. 2021, pp. 1–24, 2021.
- [14] D. E. Marcial, J. C. L. Palama, F. P. Bucog, B. J. L. Seraspe, and M. A. Launer, “8 Digital trust and social interactions among employees in the workplace,” in *Trust in Social and Business Relations: Theory and Practice*, 2024, pp. 97–108. <https://doi.org/10.4324/9781032633749-10>
- [15] Adult DigiNet. (n.d.). Retrieved December 17, 2024, from <http://adultdignet.eu/>
- [16] H. Lee, J. A. Lim, and H. K. Nam, “Effect of a digital literacy program on older adults’ digital social behaviour: A quasi-experimental study,” *International Journal of Environmental Research and Public Health*, vol. 19, no. 19, p. 12404, 2022. <https://doi.org/10.3390/ijerph191912404>
- [17] DigIN Consortium, “Enhancing digital education: The DigIN learner’s guide,” Zenodo, 2024. <https://doi.org/10.5281/zenodo.11621297>
- [18] C. Knoblauch, “Reframing teacher education through international collaboration: Exploring project-based learning in diverse contexts,” *International Journal of Advanced Corporate Learning (ijAC)*, vol. 17, no. 3, pp. 13–21, 2024. <https://doi.org/10.3991/ijac.v17i3.42895>
- [19] N. Khanlou, A. Khan, L. M. Vazquez, and M. Zangeneh, “Digital literacy, access to technology and inclusion for young adults with developmental disabilities,” *Journal of Developmental and Physical Disabilities*, vol. 33, pp. 1–25, 2021. <https://doi.org/10.1007/s10882-020-09738-w>
- [20] H. Yanto, N. Baroroh, A. Hajawiyah, and N. M. Rahim, “The Roles of entrepreneurial skills, financial literacy, and digital literacy in maintaining MSMEs during the COVID-19 Pandemic,” *Asian Economic and Financial Review*, vol. 12, no. 7, pp. 504–517, 2022. <https://doi.org/10.55493/5002.v12i7.4535>
- [21] Z. Gródek-Szostak, L. Ochoa Siguencia, A. Niemczyk, and A. Szeląg-Sikora, “From industry 4.0 paradigm towards industry 5.0,” *Environment. Technologies. Resources. Proceedings of the International Scientific and Practical Conference*, vol. 2, 2023, pp. 46–49. <https://doi.org/10.17770/etr2023vol2.7192>
- [22] A. Fensie, “A conceptual model for meeting the needs of adult learners in distance education and e-learning,” *International Journal of Advanced Corporate Learning (ijAC)*, vol. 16, no. 2, pp. 37–56, 2023. <https://doi.org/10.3991/ijac.v16i2.35729>
- [23] O. Sidoti and M. Faverio, “Dating at 50 and up: Older Americans’ Experiences with Online Dating,” *Pew Research Center*, 2023. <https://www.pewresearch.org/short-reads/2023/07/17/dating-at-50-and-up-older-americans-experiences-with-online-dating/>
- [24] A. Laphorne, “Disguise learn: A best-in-class hybrid learning program case study,” *International Journal of Advanced Corporate Learning (ijAC)*, vol. 17, no. 4, pp. 119–128, 2024. <https://doi.org/10.3991/ijac.v17i4.51453>
- [25] S. L. Chang and M. K. Kabilan, “Using social media as e-portfolios to support learning in higher education: A literature analysis,” *Journal of Computing in Higher Education*, vol. 36, no. 1, pp. 1–28, 2024. <https://doi.org/10.1007/s12528-022-09344-z>

- [26] P. de Vries, “Social media to foster self-organized participatory learning for disengaged learners,” *International Journal of Advanced Corporate Learning (IJAC)*, vol. 6, no. 1, pp. 36–41, 2013. <https://doi.org/10.3991/ijac.v6i1.2211>
- [27] V. Rautela, “Enhanced learning outcomes with audio in e-learning: An analysis,” *International Journal of Advanced Corporate Learning (IJAC)*, vol. 17, no. 4, pp. 69–79, 2024. <https://doi.org/10.3991/ijac.v17i4.48547>
- [28] N. Hussain and S. Phulpoto, “Digital literacy: Empowering individuals in the digital age,” *Assyfa Learning Journal*, vol. 2, no. 2, pp. 70–83, 2024. <https://doi.org/10.61650/alj.v2i2.231>
- [29] Project DigIN, *Digital competencies – Problem-solving* [Video]. YouTube, 2024. [https://www.youtube.com/watch?v=xNaG1\\_MG1oE](https://www.youtube.com/watch?v=xNaG1_MG1oE)
- [30] M. Faverio and O. Sidoti, “Teens, social media and technology 2024,” Pew Research Center, 2024. [https://www.pewresearch.org/wp-content/uploads/sites/20/2024/12/PI\\_2024.12.12\\_Teens-Social-Media-Tech\\_report.pdf](https://www.pewresearch.org/wp-content/uploads/sites/20/2024/12/PI_2024.12.12_Teens-Social-Media-Tech_report.pdf)

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