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Public Library Digital Competency Mapping 2019: A Survey on Digital Skills of Library Professionals With Different Qualifications

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Social science researchers rarely can repeat a representative empirical study on an essentially identical sample in a relatively short time; to confirm the validity or, on the contrary, the invalidity of initial results. In the framework of the EFOP-3.3.3-VEKOP-16-2016-00001 "Museum and Library Development for All" grant scheme in Hungary, the flagship project "My Library," implemented under the auspices of the Szabó Ervin Library in Budapest, allowed for two surveys to be conducted 2 years apart to assess the digital competence status of library professionals working in public libraries. This study seeks to answer the question of the impact of different educational levels on digital competence levels. Furthermore, it asks whether the results of the 2019 survey confirm the finding from 2017 that a higher education librarian degree, the librarian diploma, has a strong competence-increasing effect on each of the digital competence areas. Both studies are representative of the Hungarian public library sector. In the 2017 survey, 1,786 library professionals from different municipal libraries participated and in the 2019 survey, 1,868. As a result of the survey, an extremely rich data set is available, which allows for an accurate understanding of the digital skills of library professionals and the identification of areas for improvement or even the organization of targeted professional training.

Keywords: digital competences, public libraries, library professionals with different qualifications, self-assessment, Hungary

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INTRODUCTION

Librarianship is essentially a helping profession, in which the support of users is an essential requirement in all areas within the libraries' remit. The development of users' digital skills and the provision of necessary professional support are already a legal obligation for all public library professionals in Hungary (CXL, 1997). These tasks clearly require librarians to have above-average digital skills. It is not easy to find examples of empirical studies, either foreign or domestic, that specifically identify the competencies of librarians working in the public library field. One of the few studies is the one conducted by Martzoukou and Elliott (2016), which investigated how to develop digital literacy and digital inclusion skills among public library staff. They looked at how library and information science master's programs, which account for two-thirds of United States public librarians with a degree, offer courses to improve digital literacy. At the same time, interviews

were conducted with librarians and library managers to find out how the skills they learned in the course could be applied in their daily work. It was found that public librarians need to keep up-to-date with the rapidly changing external technological environment, as the digital landscape of their own working environment is constantly evolving. These demands place greater expectations on public librarians than in the past, who therefore need to acquire deeper and broader technological knowledge and skills. Public librarians need not only information technology skills but also transferable digital literacy skills. To ensure this, librarian education should focus on teaching students the so-called "big picture" topics, such as how to be able to keep up with technology, make good decisions about its use and be able to use it, and be able to transfer their knowledge of technology to others.

In 2009, the American Library Association published the core competencies for the librarianship profession (American Library Association [ALA], 2009). From this list, it can also be concluded that librarians with a master's degree must not only understand and be able to apply information, communication, and other techniques and technologies but also have other transferable knowledge and skills. Public librarians must also be able to be developed in other areas, such as education, training, leadership, collaboration, partnership building, and effective project management.

The digitization of content in public collections has created a huge amount of data. The management of digital resources and collections and the provision of services based on them require digitally literate professionals who, in addition to their human skills, have competence in the digitization of cultural heritage, digital cultural heritage, and digital services management. The BIBLIO (Boosting Digital Skills and Competences for Librarians in Europe) project is the first attempt to create an innovative professional profile for digital librarians (Barbuti et al., 2019). The aim of this project is to build an educational model to equip librarians with the digital skills needed for their new role. The digital skills and competence acquired will be mapped using the DigComp framework. Robertson (2014) examined the ability of librarians to acquire sufficient digital information literacy skills to stay up-to-date in the workplace, alongside their work, among customer service staff in New Zealand public libraries. This is particularly important, as these librarians are the interface between the library and the public in an increasingly volatile digital landscape. Because of financial or accessibility reasons, participants prefer practical learning and peer training, underlining the importance of on-the-job support. Continuing training in digital information literacy is essential to ensure that libraries remain relevant players in a difficult economic climate and to ensure that stakeholders are supported in the digital world.

Mansour (2017), examining the digital skills of university librarians, concluded that library and information professionals need to be provided with higher levels of ICT literacy to help them to regularly expand and update their knowledge in the use of digital skills. This study has shown that there is a significant relationship between certain demographic characteristics of respondents, particularly age and education, and digital information literacy. The respondents' occupational characteristics, job title, and work experience also have a strong influence on their level of digital literacy. Walek (2018), also studying the competence of university librarians, found that new tasks related to the management of research data present librarians with several challenges. The future roles and responsibilities of librarians will differ significantly from those of librarians today. The biggest challenge for university librarians of the future, and presumably for those working in other libraries, will be to manage the rapidly changing technology in addition to their traditional responsibilities. The number of electronic resources will continue to grow, but paper books will not disappear from the shelves of most libraries.

MATERIALS AND METHODS

The survey was based on the DigComp 2.1 (Carretero et al., 2017) framework, using an online questionnaire and self-report method, and explored 4 levels of digital literacy in 5 competence areas and 21 competencies. DigComp 1.0 (European Commission, 2013), used in the 2017 survey, included three proficiency levels: foundation, intermediate, and advanced, while the latest version has introduced a fourth level, the highly specialized level, also known as the master level. The levels are differentiated by the complexity of the tasks, degree of autonomy, and cognitive domains involved. A fundamental difference is that the advanced level of proficiency includes the ability to help others in addition to the previous attributes, while the master level requires the ability to use existing knowledge to improve professional practice and the ability to innovate in the profession. The five areas of competence have not been fundamentally changed by successive renewals of the framework, but three have been changed. The information competence area has been renamed information and data literacy, the communication competence area communication and collaboration, and the content production competence area has been renamed digital content production. Security and problem solving have not been changed. The following 21 competencies have been added to the five domains: browsing, searching, filtering data, evaluating data, and managing data, interacting through digital technologies, sharing through digital technologies, engaging in citizenship through digital technologies, collaborating through digital technologies, netiquette, managing digital identity, developing digital content, integrating and re-elaborating digital content, copyright and licenses, programming, protecting devices, protecting personal data and privacy, protecting health and well-being, protecting the environment, solving technical problems, identifying needs and technological responses, creatively using digital technologies, and identifying digital competence gaps.

The age distribution of the survey respondents reflects the proportions experienced in everyday library practice. The proportion of people in their 20s and 60s is the same at 7%, 30% are in their 30s, and 32% are in their 40s and 50s.

The range of qualifications of library professionals working in public libraries in Hungary is very diverse. Many work as library professionals without a librarian qualification, as allowed by the Cultural Act (CXL, 1997). The law defines a library professional as a librarian, a library computer technician, a

library assistant, an assistant librarian, or any other person with higher or secondary education qualifications necessary for the performance of library duties. Librarians are professionals with a higher educational degree. **Table 1** shows the distribution of respondents by educational level.

RESULTS AND DISCUSSION

Considering that DigComp is essentially designed to explore the digital literacy of the average citizen and that the ability to help others first appears at the advanced level of the four major skill levels, it is a legitimate expectation that librarians should strive to achieve advanced proficiency in all areas whenever possible. The general results of the survey are shown in **Figure 1**. Of the five competence areas assessed using the DigComp framework, the librarians were found to be most competent in information and data literacy; 55% are at advanced or master level, while 13% have basic information management competence. Communication and collaboration in the digital environment are advanced or master's level of competence for 41% of the public librarians, while one in five has basic competence in this area. In the areas of problem-solving, content development, and security, the proportion of each competency level is almost the same. Security is the weakest competence area in terms of proportion of advanced and mastery level holders, but content development is the last skill area in terms of proportion of basic skills holders.

Relationship Between Educational Attainment and Digital Literacy Status

The 2017 study revealed very significant differences in the digital skills of library professionals with different educational backgrounds (Borbély, 2018). Twenty of the 21 DigComp competencies were more likely to be mastered at an advanced level by librarians with higher level of education than those without a library degree. Only in digital identity management was the proportion of non-library graduates with advanced skills bigger. Library professionals with a baccalaureate as their highest qualification outperformed their non-library graduate colleagues in online citizenship, asset protection, and technical problem solving.

TABLE 1 | Distribution of respondents by education.

Education	Number of people	Share (%)
Librarian university degree (MA)	241	13
College librarian degree (BA)	654	35
Non-librarian university degree and librarian university degree	24	1
Non-librarian university degree and college librarian degree	47	3
Non-librarian university degree and assistant librarian	88	5
Non-librarian college degree and librarian university degree	28	1.5
Non-librarian college degree and librarian university degree	93	5
Non-librarian college degree and assistant librarian	170	9
Graduated from high school and assistant librarian	255	14
Non-librarian university degree	34	1.5
Non-librarian college degree	71	4
Graduated from high school	114	6
Other	41	2
Total	1860	100

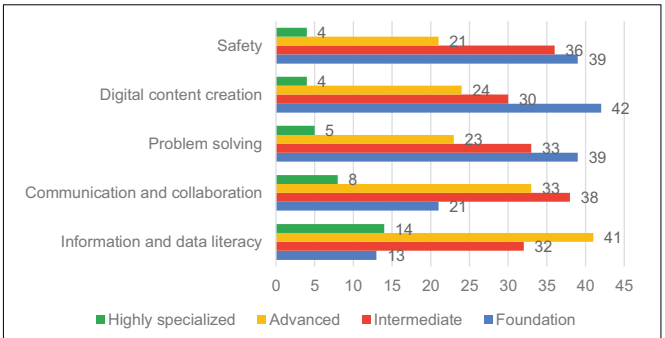

FIGURE 1 | Competence areas and proficiency levels in 2019.

Figure 2 shows the results of the 2019 survey for advanced and highly specialized level skills broken down by the three degree groups. Advanced and master's level is the sum of the proportion with advanced skills and the proportion with master's level skills. In 2017, it was already clear that a higher education qualification in librarianship has a strong positive impact on digital literacy (Borbély, 2018). The 2019 study confirmed the previous findings and further clarified the relationship between tertiary librarian education and digital competence status.

Those with only a school-leaving certificate have a lower proportion of all digital skills at advanced and master's level than the library graduates. They are closest to the proportion of graduates in the areas of high-level programming and tool proficiency, but these skills are weak in all the three groups. The number of people with a school-leaving certificate as the highest qualification in the survey was 369, and of these, 255 had a library assistant qualification. Their proportion was 20% in the survey, and the representativeness of the sample suggests that a similar proportion of professionals with a baccalaureate degree as their highest qualification is working in practice in public libraries. The gap in their skills is very large compared to those of professionals with a library degree. The proportion of those with advanced and master's level of skills in searching, evaluating, and storing information and data, which are key competence areas for librarianship, is much smaller, 24–30% behind the other two groups. They also have a low proportion of those with advanced or above proficiency in several other very important skills and are seriously lagging the librarians with a degree. These skills include extensive use of digital communication technology, etiquette in the online world, ability to collaborate, choosing the right technology for the job, transforming digital content, and overcoming skills gaps. The DigComp's philosophy is that a person at an advanced level can help others, while a person at a master level can generate professional development. In the

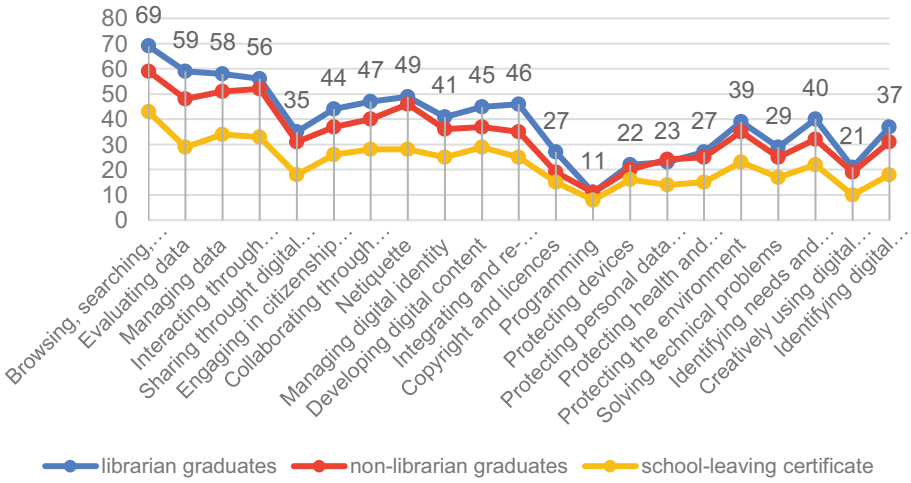

FIGURE 2 | Advanced and highly specialized level by education.

light of this, it may be worth considering what digital competence development is capable of library professionals with a degree, and what skills development is most needed.

Looking at the two groups of graduates of the 21 DigComp competencies, data protection is the only one in which the proportion of professionals with advanced and master's level skills is minimally higher than the proportion of library graduates with advanced skills, at 1%. Programming is a weak skill for both groups of graduates, with 11% at both advanced and master's levels. In the other 19 digital competencies, librarianship graduates were found to be more or less proficient. **Figure 3** shows the differences between graduates' competency scores at the advanced and master's levels.

The most positive impact of studying librarianship at the tertiary level is in the area of information and data literacy. Compared with the other graduates, the proportion of library graduates who can evaluate digital information and resources at an advanced level or above is 11% higher. They are also 10% more likely to be able to solve complex search problems and help others, and 7% more of them are experts at an advanced level in organizing, structuring, and retrieving the data and information they find.

A librarian degree is also a significant advantage in content development competence. Library professionals with a library degree are remarkably better in three of four competence areas in this area, namely, content conversion, content production, and copyright. The fourth competence is programming, where both groups of graduates surveyed have equally modest skills.

In the communication and collaboration competency area, three of the six competencies are stronger skills for library graduates than for other graduates. At the advanced and master's levels, 7% more of the former can collaborate effectively with others in an online environment, actively use the digital space, and help others to do so. There are 5% more professionals who can manage their digital identity at least at an advanced level among the library graduates than among the other graduates. The proportion of library graduates with advanced skills in the other three communication skills is also higher, but the difference is only a few percent. Two of the four problem-solving competencies, the ability to choose the most appropriate technology for the task at hand and the ability to recognize and manage their own and others' competence gaps, are more strongly possessed by the librarians. At the advanced and master's levels, they have a competence advantage of 8 and 6%, respectively. In the area of digital security, the environmental literacy skills show a competence-enhancing effect of librarian education.

The 2017 survey revealed similar phenomena to those described above in the state of competence of those with a librarian degree and those with other degrees. Managing information in a digital environment, producing digital content, the ability to collaborate, being active as an online citizen, choosing the right technology to solve a given problem, and overcoming a skills gap are clearly competencies that significantly more librarians with a higher education degree possess at least at an advanced level than those with other degrees.

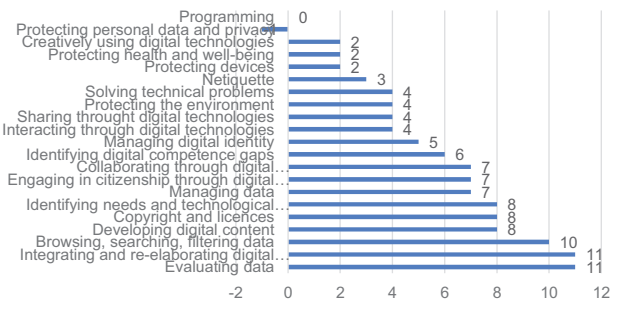

FIGURE 3 | Differences in the digital literacy status between librarian graduates and non-librarian graduates at the advanced and highly specialized levels.

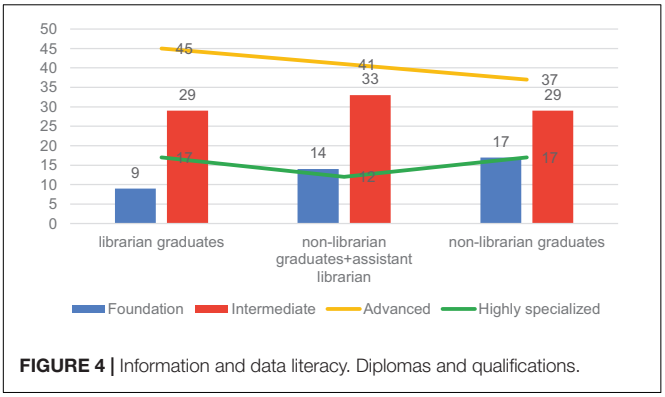

FIGURE 4 | Information and data literacy. Diplomas and qualifications.

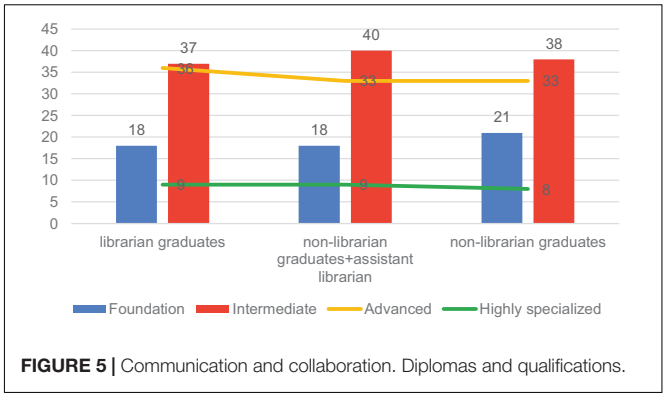

FIGURE 5 | Communication and collaboration. Diplomas and qualifications.

As in the previous survey, the distribution of the two groups of graduates in the 2019 survey was balanced according to the time of graduation. Therefore, the freshness of the knowledge acquired during training and the possible impact of age on digital literacy could not bias the results for librarians and other graduates. A breakdown of the diplomas by date of graduation is shown in **Table 2**.

Examining the Impact of Diplomas and Qualifications on Digital Literacy

In the 2019 survey, library professionals with a non-library degree, 105 people in total, 5.5% of the respondents, and those with an assistant librarian qualification in addition to their other degree, 258 people, 14% of the respondents, were classified into different education categories. This breakdown also allowed us to study the impact of librarian assistant training outside the higher education system on the digital skills of library professionals with other degrees.

For each of the information and data literacy competences, a significantly higher proportion of library graduates have an advanced or highly specialized proficiency level than other graduates. However, from the perspective of digital skills development, particular attention should also be paid to the impact of different educational and professional qualifications on the proportion of those with basic and intermediate skills. **Figure 4** shows the extent of the four proficiency levels, broken down by the three different skills groups.

In the 2019 survey, different education categories were used for those who did not hold a master's degree in information and data literacy, with the same proportion of professionals with a librarian degree and those with other degrees who consider their skills to be at master's level (17%). At this level, they are expected to be able to independently solve highly complex, multi-factorial problems of searching, storing, and evaluating, and to recommend new ideas and processes to improve their professional practice and that of others. Other graduate librarians who have attended library skills training as assistant librarians are much more critical of their own abilities, with only 12% considering themselves to be at master's level. However, the proportion of those with advanced skills is 4% higher than that of those without library qualifications. Those who also have an assistant librarian qualification lag behind library graduates by the same amount at the advanced level, 4%. This suggests that the proportion of librarians with a degree who can manage digital information in complex situations and assist others is 8% higher among librarians with a degree than among other graduates.

When looking at the proportion of people with basic and intermediate skills, the training of assistant librarians decreases the proportion of people with basic skills and increases the proportion of people with intermediate skills by a few percent.

Comparing the communication skills of all other graduates with those of librarians with higher education, it has already been shown that, when advanced and master's levels are considered together, librarians with a degree are stronger in all competence areas. After decomposing the graduate group, the effect of non-school librarian training is decrease in the proportion of those with basic skills in digital communication and increase of a few percent in the proportion of those with intermediate skills in the group of assistant librarians. This type of training does not contribute to the increase in the number of advanced and master's level graduates. Details of the proficiency levels are shown in **Figure 5**.

The poor performance in content production is mainly due to weakness in programming and copyright knowledge. The proportion of those with basic skills is high in all the three skill groups (**Figure 6**). The lowest proportion of basic skills holders is found among graduates with higher education in librarianship, the highest proportion among graduates with a non-school librarianship qualification, and the highest proportion among other graduates. Advanced content development skills, which now allow them to help others, are more common among other graduates who have completed training as assistant librarians. At the master level, there is no evidence of a competence-enhancing

TABLE 2 | Date of graduation.

Date of qualification	Librarian graduates (%)	Other graduates (%)
1970–1979	1	1
1980–1989	12	10
1990–1999	22	16
2000–2009	45	36
2010–2017	20	37

effect of librarian assistant training. The other graduate group has a higher proportion of librarians with a master's degree.

Proficiency in digital safety is slightly influenced by having a degree or having completed training as an assistant librarian. The proportion of librarian graduates at all skill levels is better than the other two groups. They have the lowest proportions at the basic level and the highest proportions at the intermediate, advanced, and master's levels. Among the other graduates who have obtained an assistant librarian qualification, the proportion of those with basic security skills is significantly lower (7%) than in the other group of non-librarian graduates (**Figure 7**).

The training of assistant librarians also has a positive impact on problem solving in the digital environment, as shown in **Figure 8**. Among the group of non-library graduates with this qualification, the proportion with only basic skills is 5% lower and the proportion with intermediate skills is 6% higher.

The competence advantage of a librarian degree is not only reflected in the proportions of upper proficiency levels. Many library graduates also have only basic problem-solving skills, but their proportions are lower than those of the other two groups. The group with other degrees has a 7% higher proportion of those with basic levels.

Graduate Librarians at Highly Specialized (Master) Level

Master-level competent professionals can develop solutions, even at the organizational level, to complex problems, not fully defined in detail, influenced by many interacting factors, related to a given DigComp competency. They can integrate their knowledge into professional practice, developing knowledge and helping others, and propose new ideas and processes in a given area (Carretero et al., 2017). Professional innovation in the use and best use of digital technology in libraries is essentially expected from professionals who are themselves masters in the field. It is, therefore, also worth briefly discussing the role that higher education, whether or not specialized, plays in achieving mastery. **Figure 9** shows the rates of mastery achieved for the 21 DigComp competencies, and **Figure 10** shows the differences in the rates of mastery between the two groups of graduates.

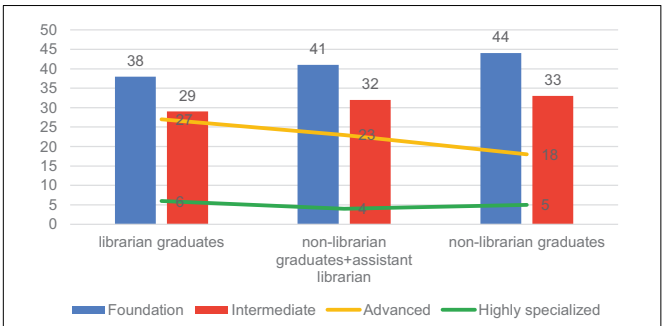

FIGURE 6 | Digital content creation. Diplomas and qualifications.

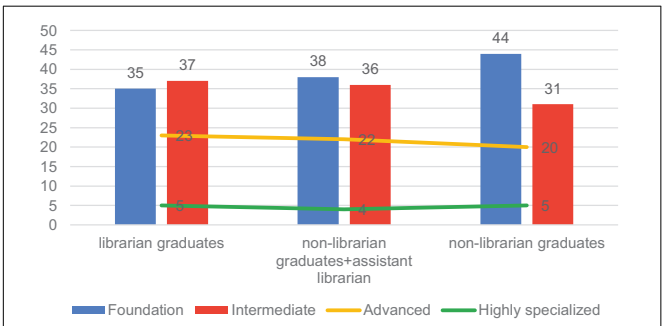

FIGURE 7 | Safety. Diplomas and qualifications.

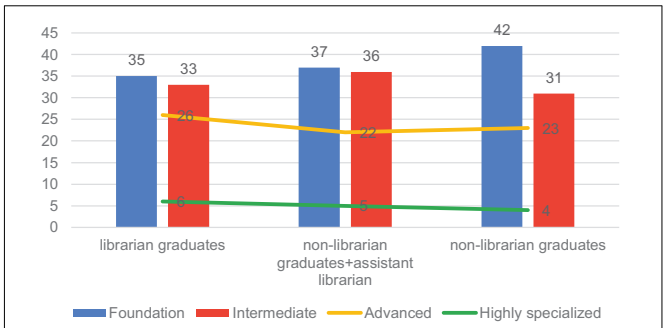

FIGURE 8 | Problem solving. Diplomas and qualifications.

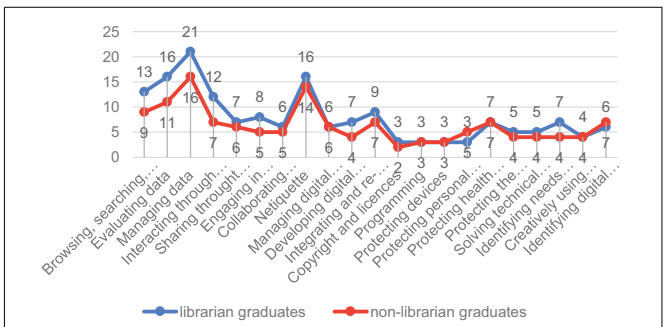

FIGURE 9 | Graduates at highly specialized level.

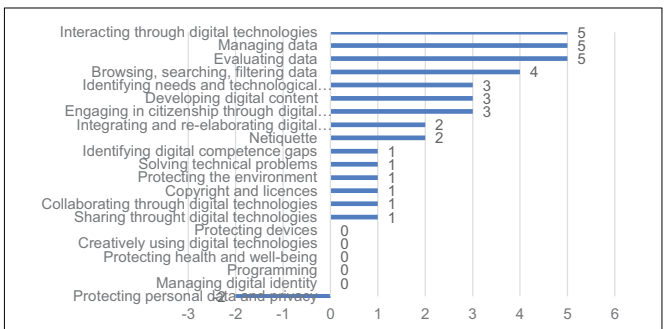

FIGURE 10 | Differences at highly specialized level. Graduates.

In the information and data literacy competence area, the highest proportions of both librarians and non-librarian graduates consider themselves to be master's level proficient. Nevertheless, the differences in the extent of mastery in this area are the largest, to the advantage of librarians with a degree. The most plausible explanation for the 5–6% competence advantage may be that information management, both in traditional and digital contexts, is a highly emphasized training content in postgraduate librarianship.

Apart from information and data literacy, there is no other competence area in which the superiority of librarianship graduates at master's level can be demonstrated for all competencies in this competence area. Some outstanding competencies stand out, such as the use of communication technology and online activity in the communication competence area, the integration and reprocessing of digital content in the content production competence area, and the identification of technological responses to needs in the problem-solving competence area.

Data protection is the only competency where the proportion of non-library graduates with a master's degree is higher than the proportion with a librarian degree. For five competencies, the study found that the proportion of master's level professionals is the same for both groups of graduates. These are asset protection, creative use of technology, health promotion, programming, and digital identity management. Where new ideas and suggestions are needed in the areas of technology selection, content production, and online citizenship, the proportion of professionals with such skills is 3% higher among library graduates.

CONCLUSION

The focus of this study was to examine the digital literacy status of library professionals with different levels of higher education. It was confirmed that a librarian degree and the training leading up to it have a significant positive impact on the digital competence level of graduates. A slightly higher proportion of librarians who obtained their librarianship skills through non-school-based training as assistant librarians in addition to their other degrees were more digitally competent than those who had not received such training. Considering that libraries, especially university libraries, employ a significant number of non-library professionals, maintaining and developing the digital information literacy of librarians is a complex and multi-faceted task.

Higher educational institutions in Hungary that provide library and information science training have a training goal (EMMI, 2016), which they must achieve in the training of future librarians. For both bachelor's and master's programs, there are high expectations for training institutions in terms of digital competence and information literacy. Basic training should ensure that graduates acquire up-to-date IT skills, enabling them to perform information processing and communication tasks and assist in the acquisition of digital literacy and information literacy and in the process of lifelong learning. Librarians with a master's degree should be able to perform tasks related to the production, organization, processing, and archiving of information content using the full range of modern information technology tools, and should be able to play an active role in dissemination of knowledge and support for research.

The training and output requirements for digital skills in higher education librarianship cover almost all the areas preferred by DigComp. It can, therefore, be concluded that librarianship training is based on modern foundations, and the results of the surveys indicate that training institutions are doing their job effectively.

For librarians already in practice, organized retraining has the greatest role to play in maintaining and developing their digital information literacy. As Robertson (2014) pointed out in his description of the situation in New Zealand, librarians have neither time nor financial resources to develop their skills independently of their day jobs. Therefore, internal training, knowledge transfer, group work, online training, and e-learning materials have a key role to play in achieving and maintaining the level of competence expected in the workplace.

It can also be effective to organize targeted training coordinated at a national level in cases where there is a serious gap in skills that needs to be filled quickly and where many professionals are affected. The competency studies described in this article were carried out in the framework of the EFOP-3.3.3-VEKOP-16-2016-00001 project "My Library," and a series of training sessions for librarians on a national scale was also organized as part of this project. The digital information literacy block of the training was partly based on the results of the 2017 competency survey, with a special focus on the identified gaps. The effectiveness of the courses has already been confirmed by the 2019 survey, with rapid progress in areas where librarians were seriously lagging in just 2 years. These included the creative and innovative use of technology to proactively collaborate with others, Internet etiquette, collaboration in the digital environment, and data protection.

Thanks to Eurostat's data collection and the methodology used for the digital skills survey, which is based on the same methodology as this study, it is possible to compare the digital competence status of Hungarian graduates and Hungarian graduates working in public libraries (European Commission, 2019). Above-basic proficiency in the librarian survey is the combined percentage of those with intermediate, advanced, and master's level proficiency. A librarian degree sets librarians apart from the average group of graduates. Seventy-three percent of librarians with an advanced degree in librarianship have above-basic digital literacy. The proportion of librarians with other degrees working in public libraries is almost the same as

the average for Hungarian graduates, with 61% having digital competencies above the basic.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

Ethical review and approval were not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements.

AUTHOR CONTRIBUTIONS

The author confirms being the sole contributor of this work and has approved it for publication.

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REFERENCES

American Library Association [ALA] (2009). *ALA's Core Competences of Librariaship*. Available online at: https://www.ala.org/educationcareers/sites/ala.org.educationcareers/files/content/careers/corecomp/corecompetences/finalcorecompstat09.pdf (accessed March 29, 2022).

Barbuti, N., Di Giorgio, S., and Valentini, A. (2019). The Project BIBLIO – boosting digital skills and competencies for librarians in Europe: an innovative training model for creating digital librarian. *Int Inf. Libr. Rev*. 51, 300–304. doi: 10.1080/10572317.2019.1669935

Borbély, M. (2018). A végzettségés a könyvtárosok digitális kompetenciaszintje közötti összefüggések összehasonlító elemzése. *Tud. Mûszaki Tájékoztatás* 65, 287–306.

Carretero, S., Vuorikari, R., and Punie, Y. (2017). *DigComp 2.1: The Digital Competence Framework for Citizens with Eight Proficiency Levels and Examples of Use*, *EUR 28558 EN. JRC Working Papers JRC106281*. Luxembourg: Publications Office of the European Union. doi: 10.2760/38842

CXL (1997). *Törvény a Muzeális Intézményekrõl, a Nyilvános Könyvtári Ellátásról és a Közmûvelõdésrõl*. Available online at: https://njt.hu/jogszabaly/1997-140-00-00 (accessed March 29, 2022).

EMMI (2016). *Rendeleta Felsõoktatási Szakképzések, az alap- és Mesterképzések képzési és Kimeneti Követelményeirõl, Valamint a tanári Felkészítés közös Követelményeirõl és az egyes Tanárszakok Képzési és Kimeneti Követelményeirõl szóló 8/2013. (I. 30.) EMMI rendelet módosításáról*. Available online at: https://net.jogtar.hu/jogszabaly?docid=A1600018.EMM&txtreferer=00000001.txt (accessed March 29, 2022).

European Commission (2013). *DIGCOMP: A Framework for Developing and Understanding Digital Competence in Europe*. Luxembourg: Publications Office of the European Union. doi: 10.2788/52966

European Commission (2019). *Eurostat. Individuals' Level of Digital Skills*. Available online at: https://ec.europa.eu/eurostat/data/database (accessed March 29, 2022).

Mansour, E. (2017). A survey of digitalinformationliteracy (DIL) amongacademiclibrary and informationprofessionals. *Digit. Libr. Pers.* 33, 166–188. doi: 10.1108/DLP-07-2016-0022

Martzoukou, K., and Elliott, J. (2016). The development of digitalliteracy and incluisonskills of publiclibrarians. *Commun. Inf. Lit*. 10, 99–115. doi: 10.15760/comminfolit.2016.10.1.17

Robertson, R. (2014). Reframingourselves: digitalinformationliteracyskills of frontline publiclibrarystaff. *N. Z. Libr. Inf. Manage. J.* 53, 21–47.

Walek, A. (2018). Is data management a new "digitisation"? A change of therole of librarians in the context of changing academic libraries' tasks. *Paper presented at: IFLA WLIC 2018 – Kuala Lumpur, Malaysia – Transform Libraries, Transform Societies in Session 139 – Education and Training, Science and Technology, and Continuing Professional Development and Work place Learning*, Kuala Lumpur.

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