Project Management Literacy. New Challenges for Librarians and Information Professionals in the European Union and Beyond

Zuza Wiorogórska(✉)

University of Warsaw, Warsaw, Poland
`z.d.wiorogorska@uw.edu.pl`

Abstract. The European Universities Initiative (EUI) was established in 2017 to strengthen strategic partnerships across the EU between higher education (HE) institutions by building networks of universities. In 2022, there were already 41 European University Alliances (EUA) gathering 340 institutions. The majority of libraries, members of those alliances, participate for the first time in international projects that have specific requirements and workflows driven by grant agreement requirements. The paper presents an in-depth analysis of the skills and competencies rooted in information literacy needed for successful project management. The analysis resulted in a map of competencies needed to work on international projects funded by the EU. The analysis showed that the skills traditionally associated with LIS jobs are crucial while working on EU-funded projects. The map of competencies may be useful not only for the staff of EUI but also for the library management and other LIS professionals who wish to become members of project teams.

Keywords: EUI · European universities · information literacy · project management · TRAIN4EU

1 Introduction

For at least two decades the workflow of higher education (HE) institutions in Europe has been driven by the project approach. The European Union (EU) supports HE financially and aims at maximal internationalization and cooperation among European countries.

The European Universities Initiative (EUI) was established in 2017. Its ambition is to strengthen strategic partnerships across the EU among higher education institutions by building networks of universities across the EU which would enable students to obtain a degree by combining studies in several EU countries and contribute to the international competitiveness of European universities [1]. In 2019, EUI opened its first call for HE institutions' alliances, the next calls were in 2020 and 2021. At the end of 2022, there were already 41 European University Alliances gathering 340 HE institutions [2], and the latest call closed in January 2023.

Being a member of such an alliance results in a lot of change in everyday work practice and requires the acquisition of specific project knowledge and skills. For the

majority of libraries that are members of those alliances, this is the first time they have participated in joint, international (so also multicultural) projects that have specific requirements, terminology, and workflows driven by grant agreement requirements and expected outcomes.

2 TRAIN4EU Project

Transforming ReseArch & INnovation agendas and support in 4EU + (TRAIN4EU)[1] is a project led by 4EU + Alliance [3] in the years 2021–2023. Although it is not a research project like most others in Horizon 2020, it has defined a consistent methodology that uses an in-depth mapping of activities and assessments as a basis, so the existing best practice across the alliance can be easily adapted and combined. This approach also allows us to consider the very different framework conditions under which the six universities of the 4EU + Alliance operate, as well as to identify areas to develop completely new transformative measures. TRAIN4EU seeks to integrate research, innovation, and service to society into 4EU + Alliance. Moreover, it explores and demonstrates how 4EU + can link collaboration on research and innovation (R&I) in multiple ways to the collaborative work that is already developed in the Alliance. All of this is an important topic for the European Union, in addition to its societal dimensions.

The project consists of five transformation modules (named 'work packages'). For each module, the project teams develop a comprehensive protocol that dictates parameters for mapping and assessment, as well as uniform formats for the various consultations that teams conduct, both internally in the alliance, and with external stakeholders [4].

The work package led by the 4EU + libraries is entitled Mainstreaming Open Science and aims at assessing best practices in knowledge sharing and scholarly communication in Open Access in 4EU +, as well as in Open Science implementation, to present recommendations, models, and tools on how to support Open Science.

TRAIN4EU is designed as a case study, where the institutions act as cases in a given transformation module. All six universities will provide examples of activities, procedures, practices, and know-how that will be analyzed and developed.

3 Methodological Approach

For the purpose of this paper, there were two sources of data collection. First was a review of literature on knowledge and project management and on new job requirements for librarians; the second one was the case study of work experience on the project TRAIN4EU, co-led by the academic librarians from the University of Warsaw Library (Poland) in the framework of the 4EU + Alliance.

According to Campbell and Yin, case study research is commonly found in many social science disciplines as well as the practicing professions [5, p. 34]. I was placed in the field to observe the workings of the case, as suggested by Stake [6]. The data for this case study was collected using participant observation, the project's documentation review, and a description of the context. The boundaries of the case were time (the

---

[1] Project's https://doi.org/10.3030/101016674.

project period), a relevant social group (librarians and information professionals), an organization (project team), and a geographic area (Europe). As with any qualitative study, the interpretation is emphasized. To audit the quality of my study, triangulation was conducted for data sources, the investigator, and the theory. I asked other members of the TRAIN4EU project to review the steps of my research process.

Since the skills and competencies rooted in information literacy are understood here as an umbrella concept (thus subsuming many related 'literacies'), and have been deeply analyzed and discussed by several authors, this forms a smaller part of this paper. Emphasis has been placed, instead, on describing the lesser-known skills in more.

4 Analysis of Skills and Competencies Needed to Work in International Projects

4.1 Skills and "Literacies" Librarians Already Have

Knowledge and Information Management in Libraries. Librarians and information professionals know how to collect, create, store, share, and use knowledge and information. They are aware of processes of knowledge and information flow through the project, as well as communication diffusion and dissemination. They also are used to group work and know the value of communities of practice, described by Bartlett [7, p. 100], as groups of people with shared interests or sets of specific issues that come together in person or virtually to work through problems, brainstorm opportunities, tell stories, discuss best practices, review lessons learned, and network. They are "for practitioners, by practitioners".

Library and information professionals are also familiar with diverse knowledge management tools and undoubtedly that is this profession's asset and a strong component of information competencies. Knowledge management tools act as project management support to meet the project's goals. Different tools and technologies might be used at each phase of the project management cycle. For EU projects, groupware (collaboration software) and document management systems are crucial (sometimes the term 'file management system' is used interchangeably).

Information Literacy, Digital Literacy, Data Literacy, Science Literacy. Information and digital literacy skills useful for the work mentioned in the previous paragraph and related to document management systems (DMSs) are, among others, document classification using metadata or keyword searching and retrieval systems. Google Drive, MS Teams, or Dropbox are examples of the most popular DMSs. Groupware facilitates remote collaboration, which is particularly important when multiple project team members come not only from different institutions but also from different countries. Google Drive or MS Teams which both include a mix of asynchronous and synchronous tools can serve as good examples of groupware.

Data literacy comprises the ability to handle metadata, the theoretical knowledge and application of copyright, as well as access to data, data sharing, data archiving, and its reuse. These are skills that are useful while preparing a data management plan and managing data throughout the project.

Science literacy, as described by Hopkins [8], is an understanding of scientific concepts and processes in a way that informs one's ability to make decisions, participate in civic and cultural affairs, and contribute to economic productivity. The three pillars of science literacy are the understanding of content knowledge, the understanding of scientific practices, and the understanding of science as a social process. These are the skills usually acquired through higher education; in the education of librarians and information professionals, there is certainly more emphasis on their understanding and ability to apply them in practice.

Research Data Management and FAIR Data. All EU-funded projects are required to compose a data management plan and then to produce FAIR data and deposit them in certified open data repositories. Particularly projects led under Horizon Europe require access to FAIR data and research outputs (e.g., software, models, protocols) according to the principle "as open as possible, as close as necessary". The FAIR acronym stands for Findable, Accessible, Interoperable, and Reusable. The FAIR principles are still relatively little known to project teams, while librarians are already reasonably well prepared (and they are training continuously) to support data practices, and their skills to implement good practices in supporting projects in regard to open science are advanced.

4.2 Skills and "Literacies" Librarians Should Improve

Approaches to Project Management. In Poland, Wojciechowska [9] analyzed the content of competition notices and their requirements for candidates for the post of library director (of different types of libraries). Among them was "experience in project management". The ability to manage projects as one of the competencies of a 21st-century librarian (not necessarily applying for a managerial position) was also included in the proposed competence profile by Marcin Karwowski [10]. A Polish "Lexicon of Management and Marketing in library science" [11, p. 189] defines a project as "an undertaking that has a start date, specific objectives, and limits, a fixed scope of responsibility and distribution of activities, a budget and a completion date. The basic characteristics of a project are therefore: defined in time, unique (one-off), complex, and purposeful. In contrast to a process, which is staggered over time and consists of specific and repetitive activities, a project is something new, unique in the organization, produced in a creative and innovative way with clearly defined time limits". According to the authors of this definition, three approaches can be distinguished in project management practice. These are 1) the traditional project management style when a project is implemented in stages that are executed in a cascading manner; 2) the Agile (adaptive) approach, where the project team does not follow a predetermined plan but follows the ever-changing needs of the audience; and 3) the extreme project management that implies the need for planning and control, but at the same time is very flexible in adapting to change.

In literature and in practice, there are diverse approaches to project management. In big, often international projects funded by the public sector, the dominant approach is traditional project management (TPM), usually associated with the waterfall approach. TPM identifying characteristics are low complexity, few scope change requests, well-understood technology infrastructure, low risk, experienced and skilled project teams,

plan-driven projects, and linear or incremental project management life cycle model [12, p. 40–44].

The waterfall approach in project management became popular, particularly with the increasing number of externally funded projects including those financed by the EU. Waterfall assumes careful planning of the individual key steps in the subsequent implementation of the project. It requires the need to anticipate the effects and final outcome of the project which is implemented sequentially on the basis of a previously created detailed document. It includes a graphical representation of the project phases – the so-called Gantt chart showing the consecutive stages of implementation. Waterfall at an early stage forces the team to define precisely the objectives of a given activity, as well as what they would like to achieve as a result of it. It requires a lot of documentation; it is suitable for international projects, involving partners from different countries. The waterfall should be enriched with "Agile" [13].

The Agile approach began in 2001 with the publication of the Manifesto for Agile Software Development [14], which is considered to be the beginning of the systematic development of Agile methodologies in the technology industry (See Fig. 1 and Table 1 below for characteristics of the Agile approach). Since then, the Agile method appeared to be beneficial in management, perceived as the most modern methodology in project management, and has led to extensive application also in non-software development contexts. In recent years, Agile has also gained popularity in library management [see 15, 16, 17, 18].

Figure 1 compares the traditional (here named 'bureaucratic' by Denning [19]) and Agile project approaches.
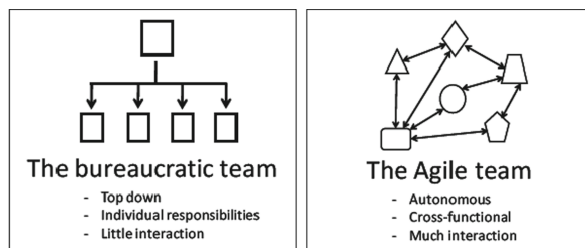

Fig. 1. Agile vs. bureaucratic team (Source: Denning, 2018, p. 33)

Table 1 summarizes Agile and waterfall project approaches, as suggested by the OPERAS-PL project team [20].

From the library management perspective, the Agile methodology seems to be a good solution to manage project outcomes, such as new services for users, and new ICT solutions. In contrast, the waterfall approach will work better when managing a longer project involving a larger group of employees.

In the TRAIN4EU project, as in the majority of big EU projects, we apply a waterfall approach; however, some parts of it show signs of Agile, too.

Cross-Cultural Skills. Intercultural communication has been the subject of research work since the 1960s. A pioneer in this field was the Dutch scholar Geert Hofstede, author

Table 1. Agile vs. waterfall – two styles of project management (Source: OPERAS-PL)

	AGILE	WATERFALL
Main features	Working in iteration mode that is, producing successive project elements in small time intervals (*sprints*).	Working step by step, from the detailed plan to the project implementation sequence.
Pros ✚	Ensures flexibility and rapid response: it allows new problems to be identified on an ongoing basis and the use of experimental solutions.	Requires a precise definition of the objectives of the action from the outset - requires the establishment of a precise timetable and budget (essential for grant applications).
Downsides ⬇	A small number of initial assumptions and plans can hinder holistic project planning and, in some cases, deeper research reflection, which is difficult to plan in *sprints*.	Limits the scope for experimentation and adaptation of the workflow to new assumptions or needs.
Application	✳ In projects where short regular meetings are possible ✳ As part of a larger project on specific tasks requiring a flexible approach.	✳ In small teams with clear hierarchies ✳ In international projects of varying standards ✳ With the cooperation of various institutions.

of the book *Cultures and Organizations: Software of a Mind* [21], but mostly known for his theory of cultural dimensions. The six dimensions of national cultures – power distance, individualism vs. collectivism, uncertainty avoidance, masculinity vs. femininity, long-term orientation vs. short-term orientation, and indulgence vs. restraint – are until recently applied in practice, in international communication, management, and marketing, and have inspired several research studies as well as improving the organizational structure and communication in many international enterprises. Awareness of how diverse national societies cope with particular challenges is also invaluable while working in multiple teams and on international projects in libraries.

The fact that the members of a project group are, for example, only European countries does not mean that there are no cultural differences among them. Erin Meyer, who also explores intercultural communication, in *The Culture Map* [22], her most recognized book, provides a systematic, step-by-step approach to understanding the most common

business communication challenges that arise from cultural differences, and offers steps for dealing with them more effectively. For example, she writes about the concept of low- and high-context communication. She describes the strategies for working with people from high- and low-context cultures, as well as strategies for multicultural collaborations, the most important from the perspective of this paper. Figure 2 summarizes the features of low- and high-context communication and shows examples of countries that belong to it.

Fig. 2. Low- and high-context communication (Source: Meyer, 2014, p. 38)

In the TRAIN4EU project, there is a mix of low- and high-context cultures, which is an interesting experience. This is compounded by differences in language skills. The "high-context" project team members need to get used to simple and precise messages formulated by the "low-context" ones in a language foreign to everyone.

That is why it is so important to learn intercultural communication. The process of learning passes through three phases: 1) awareness – the recognition that the environment where people grow shapes their mentality, called by Hofstede a 'mental software'; 2) knowledge – one will probably never share the cultural values of another, but s/he can learn about the culture, its symbols, heroes, and rituals to know where these values differ; 3) skills – based on awareness, knowledge, and practice – the ability to recognize and apply the values of other culture, as well as to resolve the communication problems [21, p. 230–231].

English Language Skills. Although currently only two countries with English as the official language are members of the EU, English is a working language of the EU and so of the project applications and management. Even though the English proficiency level is not officially required, in practice, it is not possible to work on international projects without it. The level of English (and other foreign languages) fluency depends mostly on the education system in a given country. Regarding higher education, it depends on the importance attached to the teaching of foreign languages in a given field of study. One might be tempted to conclude that in programs such as library and information science,

this has rarely been a priority. This is particularly the case in widening countries that are, as defined by the European Commission, countries with low participation rates in the Seventh Framework program of the European Community for research and technological development including demonstration activities (FP7) and Horizon 2020 projects. Among EU member states, these are Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Malta, Poland, Portugal, Romania, Slovakia, and Slovenia.

The consequences of this negligence are still being suffered today. Enabling staff to improve their language skills should become a priority for library managers.

Work in Project Teams. The skills and competencies of project team members are a key factor in the success of all projects. As the characteristics of the expected outcomes change, so does the profile of the project team best suited to achieve those outcomes. Projects in the TPM model may have less experienced team members and even less experienced project managers working on them. Such teams can be geographically dispersed without losing their effectiveness [12, p. 88]. According to Wysocki, the following characteristics have been identified by project managers as being the most important for core team members to possess: commitment to the project, shared responsibility, flexibility, task-oriented, ability to work within schedules and constraints, trust and mutual support, team-oriented, open-minded, ability to work across structure and authorities, ability to use project management tools [12, p. 229–230].

5   Map of Competencies - Project Management Literacy

An overview of information literacy-related skills and competencies needed for work on international projects is the main outcome of this paper. As it has even become fashionable for some time to refer to such sets of competencies and skills as "literacies", for the purposes of this analysis I propose to use the term "project management literacy" (PML). I understand PML as a set of skills and competencies essential to becoming an independent and self-confident member of a project management team.

It is worth noting that the term 'literacy' is clear and well-understood in the English language; this is not the case in many different languages. As I wrote in one of my previous works, analyzing the translation of the term 'information literacy' into French and Polish "in literal translation, in non-English speaking countries, 'literacy' is a term connoted culturally, in no way equivalent to 'literacy' used in the Anglo-Saxon literature" [23, p. 54]. So I suppose that in many languages the PML would be translated descriptively, where the word 'literacy' would not be translated as 'alphabetization' but as 'competencies'.

The map of competencies may be useful not only for the staff of European University Alliances but also for other librarians and information professionals who would like to become members of project teams and for the library management who hire them.

Fig. 3. Project Management Literacy Skills Map

6 Conclusions

The analysis showed that the skills traditionally associated with librarians' and information professionals' jobs, such as fluency in metadata, information literacy, information management, or research data management (including FAIR principles) are crucial while working with EU-funded projects.

Hence, on the one hand, librarians and academic professionals may already become important actors on the scene of a project-based workflow; on the other hand, there are some competencies to be refined, that should be improved not only to comprehensively support the researchers but also to be able to conduct projects independently.

In 2022, LIBER published an RDM Workshop Report [24], where one of the concluding sentences was that skills that librarians already have and do not need to develop depend heavily on the library [p. 2]. It is hard to disagree with such a conclusion also in the case of project management skills, particularly taking into account the considerations presented in the above sections.

I will suggest the gaps can be filled in two ways. First, in the process of university education, the subject of project management could be included in the curriculum of studies. This is probably already partly the case in many academic centers but could be spread through initiatives such as the BSLISE (Building Strong Library and Information Science Education (BSLISE) a working group within IFLA that recently published *IFLA Guidelines for Professional LIS Education Programmes* [25] and works to strengthen the international quality of LIS education to perfect the LIS professional practice.

Second, as mentioned in the sections on improving English language skills and working in project teams, library managers should make every effort to enable employees to continuously develop and improve their skills. Understandably, this may not always be easy to implement, especially now, at a time of budget cuts and the economic crisis sweeping Europe. That is why it is worth thinking about grassroots library mentoring initiatives. It is an extremely important and widely used topic for example in the United States – just to mention the recently released three-volume publication dedicated to academic library mentoring [26]; meanwhile, it seems that in Europe there is still insufficient appreciation of its value and the benefits it can bring to both individual employees and the institution as a whole.

References

1. European Education Area. European Universities Initiative. https://education.ec.europa.eu/education-levels/higher-education/european-universities-initiative
2. European Education Area. Factsheets on the 41 European Universities. https://education.ec.europa.eu/european-universities-factsheets
3. 4EU+. 4EU+ Alliance. https://4euplus.eu/4EU-1.html
4. 4EU+. TRAIN4EU+ Work Packages. https://4euplus.eu/4EU-226.html
5. Yin, R.K.: Case Study Research and Applications: Design and Methods, 6th edn. SAGE, Los Angeles (2018)
6. Stake, R.E.: The Art of Case Study Research. SAGE, Thousand Oaks (1995)
7. Bartlett, J.A.: Knowledge Management. A Practical Guide for Librarians. Rowman & Littlefield, Lanham (2021)
8. Hopkins, K.: Five Ways Librarians Teach Science Literacy. A Student Lens on the Invaluable Role Librarians Play. Library Connect. https://www.elsevier.com/connect/library-connect/five-ways-librarians-teach-science-literacy
9. Wojciechowska, M.: Nowe Role Kadry Kierowniczej Bibliotek Wobec Zmieniających Się Warunków I Oczekiwań Społecznych W Świetle Ogłoszeń Konkursowych Na Stanowiska Dyrektorów Bibliotek. In: Wojciechowska, M. (ed.) Multibibliotekarstwo, pp. 49–60. Wydaw. SBP, Warszawa (2018)
10. Karwowski, M.: Profil Kompetencyjny Bibliotekarza XXI Wieku W Świetle Monitoringu Rynku Pracy. In: Wojciechowska, M. (ed.) Multibibliotekarstwo, pp. 61–70. Wydaw. SBP, Warszawa (2018)
11. Wojciechowska, M., Kamińska, J., Żołędowska-Król, B., Jaskowska, B.: Leksykon Zarządzania i Marketingu w Bibliotekach. Wydawnictwo SBP, Warszawa (2019)
12. Wysocki, R.K.: Effective Project Management: Traditional, Agile, Extreme, 6th edn. John Wiley & Sons, Indianapolis (2012)
13. Mounir, A.: Project Management Between Waterfall and Agile. CRC Press/Taylor & Francis Group, Boca Raton (2018)
14. Manifesto for Agile Software Development. https://agilemanifesto.org/
15. Babatope, I.S., Idowu, O.F., Agwu, P.U., Dumbiri, R.: Developing an integrated library management system with agile methods, the university of Ibadan experience. In: 87th IFLA World Library and Information Congress (WLIC)/2022 in Dublin, Ireland (2022). https://repository.ifla.org/handle/123456789/1953
16. Burke, S., MacIntyre, R., Stone, G.: Library data labs: using an agile approach to develop library analytics in UK higher education. Inf. Learn. Sci. **119**(1/2), 5–15 (2018)

17. Forsman, D., Hansson, P.: Introducing agile principles and management to a library organization. In: Proceedings of the IATUL Conferences. https://docs.lib.purdue.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=2007&context=iatul

18. Niemi-Grundström, M.: Developing, evaluating and managing library with agile methods. Libr. Manag. **35**(6/7), 481–485 (2014)

19. Denning, S.: The Age of Agile. How Smart Companies are Transforming the Way Work gets Done. Amacom, New York (2018)

20. OPERAS-PL. Między Work Package'em, Taskiem a Deliverablem: Terminy w Projektach Horyzont Europa. https://operas.pl/2022/11/03/miedzy-work-packageem-taskiem-a-deliverablem-terminy-w-projektach-horyzont-europa/

21. Hofstede, G., Hofstede, G.J., Minkov, M.: Cultures and Organizations. Software of the Mind. Intercultural Cooperation and Its Importance for Survival (3rd ed.). McGraw-Hill, New York (2010)

22. Meyer, E.: The Culture Map. Breaking through the Invisible Boundaries of Global Business. Public Affairs, New York (2014)

23. Wiorogórska, Z.: Information literacy and doctoral students in France and Poland. A comparative study. Zagadnienia Informacji Naukowej **52**(1), 52–66 (2014)

24. LIBER. Report on Outputs on LIBER Winter Event Workshop "Data Management Skills and Training Development for Libraries. https://libereurope.eu/wp-content/uploads/2023/04/Report-on-Winter-Event-Workshop_PDF-1.pdf

25. Chu, C.M., et al.: IFLA Guidelines for Professional LIS Education Programmes. IFLA, The Hague (2022)

26. Rod-Welch, L.J., Weeg, B.E. (eds.): Academic Library Mentoring. Fostering Growth and Renewal. Association of College and Research Libraries, Chicago (2021)