

IDENTIFICATION OF THE NEEDS OF USER EXPERIENCE DESIGNERS IN ORGANIZATIONS

Kamila ŁUCZAK

Wroclaw University of Economics and Business; kamila.luczak@ue.wroc.pl, ORCID: 0000-0002-7085-5704

Purpose: The purpose of this article is to identify the needs of User Experience (UX) designers in organizations.

Design/methodology/approach: In the theoretical part, the author uses a literature review to analyse the literature in the area of User Experience, requirements engineering, and also refers to selected stages of project management in organizations. The empirical part uses a qualitative method - in-depth interviews. The author developed a scenario and the goals she wants to achieve by interviewing User Experience designers.

Findings: The needs of User Experience designers have been identified in four areas: the division of the UX/UI position, the essence of design system, communication with the client and the design process in the organization. Most respondents value the lack of division of the UX/UI designer position. UX designers need regular meetings with the client and understanding of the individual stages of design by the client. Designers would also like to be able to conduct their own research with users and maintain constant contact with developers. In addition, respondents emphasize the need to develop a design system in the organization.

Research limitations/implications: In future research, the author would like to conduct research with User Experience designers from other countries and conduct a comparative analysis of the collected results.

Practical implications: The conducted research indicates the needs of User Experience designers in organizations. After reading the article, project managers should consider whether the problems identified can be noted in their companies as well. Finding solutions to these problems may result in improved working conditions and, consequently, in the construction of better end products.

Originality/value: The key value of the research carried out as part of the article is the identification of current problems of User Experience designers. Project managers, after getting acquainted with the requirements, problems of UX designers, will be able to make changes in organizations.

Keywords: User Experience (UX), requirements elicitation, project management.

Category of the paper: Research paper.

1. Introduction

The changing environment in which contemporary organizations operate requires high adaptability (Sepioło, Olszowy, Kucwaj, 2022; Ławniczak, 2022). Adapting an organization may involve adapting to new ways of managing projects or creative ways of solving problems. Project management itself has become an integral part of the contemporary organization (Puto, 2022).

User experience (UX) design is closely related to the topic of project management. A common reason for project failure is a lack of focus on the user during the design process (St. Peter, 2015). The role of a UX designer in an organization is to maintain the relationship with the user and to ensure that the user has a positive experience in the use of the product. In addition, designers can also assist the organization in selecting the project management methodology (Mara, Jorgenson, 2015). Understanding the relevance of User Experience allows organizations to identify gaps in the business and how to fill them (Furniss, Curzon, Blandford, 2018).

The first task of the User Experience designer is the gathering of user requirements (Łuczak, 2022). However, when considering the requirements elicitation process, people usually unconsciously think about the users' requirements for the product. People in the position of User Experience designers also have their requirements. Meeting these requirements can determine the quality of UX in a given project.

In this context, the following question can be formulated: What are the needs of User experience designers in organizations? The author has also formulated supporting questions:

(RQ1) What are UX designers' preferences in the area of splitting the User Experience/User Interface designer position?

(RQ2) What are the needs of User Experience designers in terms of communication with clients?

(RQ3) What are the needs of User Experience designers regarding the design process in the organization?

(RQ4) How do User Experience designers evaluate the design system concept in the organization?

The aim of the article is to identify the needs of User Experience designers in organizations. In order to achieve the stated aim, the author used a method such as a literature review and in-depth interviews.

2. Literature review of the area

The origins of the interest in User Experience can be traced back to the 1950s (Nielsen, 2017). Among the related fields to User Experience over the years, authors distinguish between user-centred design (UCD) and human-centred design (HCD) (Karat, 1997; Gabbard, Hix, Swan, 1999; Kraft, 2012; Lowdermilk, 2013; Rose, Björling, Kim, Alvarez, 2018; Farooqui, Rana, Jafari, 2019). HCD can be defined as an approach to design system in which user interactions are designed with human factors, ergonomics, and usability in mind (International Organization for Standardisation [ISO], 2019).

In contrast, the term UCD is defined as an approach to design system that enables an organization to create a product that meets user requirements (Lowdermilk, 2013). In practice, the terms UCD and HCD are used interchangeably. However, the term human-centred design indicates that it is worth considering not only users but also non-user stakeholders (ISO, 2019).

Defining User Experience in a single way is not possible. Over the years, authors have formulated the definition of UX in a variety of ways (Hassenzahl, Tractinsky, 2006; Krug, 2013; Allam, Razak, Hussin, Dahlan, 2013; Norman, 2013). In the context of IT products, User Experience can be defined as the users' impressions and reactions resulting from using or imagining using a system (ISO, 2019). In contrast, one of the pioneers of User Experience design, Don Norman, defines User Experience as all aspects of the end users' interaction with an organization, its services, and its products (Babich, 2020).

When considering the topic of User Experience design, it is also important to mention User Interface (UI) design. UX/UI designer is often listed in job adverts. However, there is a difference between the two roles. The UI designer is primarily responsible for the User Experience as it relates to visual elements. The UI designer designs the graphical appearance of interfaces and the transitions between them (Lamprecht, 2022). It should be emphasised that in an organization, the UX and UI designers should work together to maintain product integrity.

In relation to maintaining consistency in the UX/UI domain, it is also important to provide a definition of a design system. A design system is defined as an elaborate set of standards used to manage design in a project, creating a common language and visual consistency (Fessenden, 2021). The benefits of using a design system include the aforementioned consistency, improved contact between designers and developers, and the collection of documentation in one place (Fanguy, 2019; Vesselov, Davis, 2019).

The User Experience design process cannot be seen as a separate component without links to other phases in the project. It is primarily linked to the requirements engineering phase. Requirements engineering can be defined as the process of eliciting, analysing, documenting, validating, and managing requirements (Ambreen, Ikram, Usman, Niazi, 2018). Requirements elicitation is one of the first tasks performed by UX designers at the beginning of the design process. There are various methods for requirements elicitation, including surveys, interviews,

workshops, and observations (Mościchowska, Rogoś-Turek, 2019; Chakraborty, Sarker, Sarker, 2010; Curcio, Navarro, Malucelli, Reinehr, 2018; Sutcliffe, Sawyer, 2013; Zowghi, Coulin, 2005; Carrillo De Gea, Nicolás, Fernández Alemán, Toval, Ebert, Vizcaíno, 2012). The collected requirements form the basis for the User Experience designer to design the User Experience. Furthermore, User Experience design has become the basis for different product design methodologies such as lean UX and agile UX (Gothelf, Seiden, 2021; Aarlien, Colomo-Palacios, 2020; Hartson, Pyla, 2018; Schwartz, 2013; Brown, 2012).

As a final step, it is also worth looking at the number of publications in the field of User Experience in the last 10 years (2012-2022). The author constructed the following search TITLE-ABS-KEY ('user experience' OR 'UX') and applied it to the Scopus database (Figure 1).

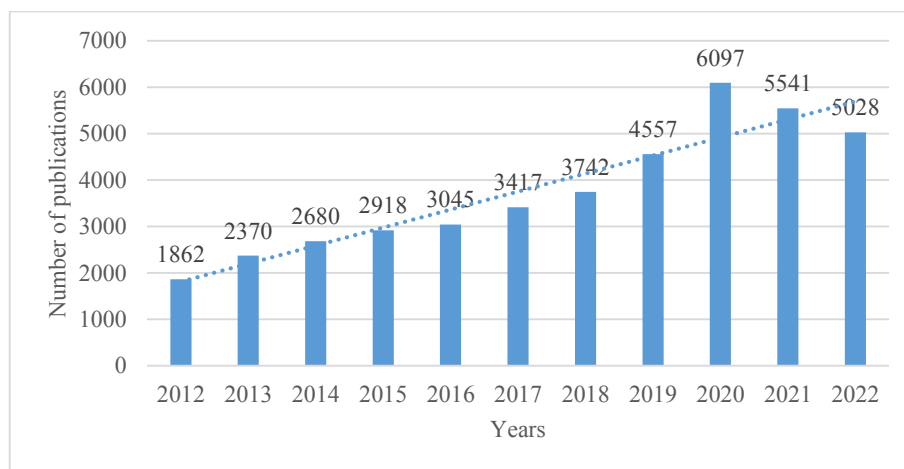


Figure 1. Number of publications between 2012 and 2022 in the Scopus database (research as at 31.01.2023).

Source: own elaboration.

An upward trend in the number of publications on User Experience can be observed between 2012 and 2020. From 2020 to 2022, on the other hand, there is a slight decrease in the number of publications; however, in both 2021 and 2022, there are still around 5000 publications on this topic.

In summary, as evidenced by the abundance of academic and industry publications, the topic of User Experience design is highly relevant in today's organizations. By putting the user at the center of the design process, organizations can create products that meet users' needs.

3. Research methodology

Using the literature review and in-depth interviews, the author developed the research procedure in the form of a flow chart (Figure 2).

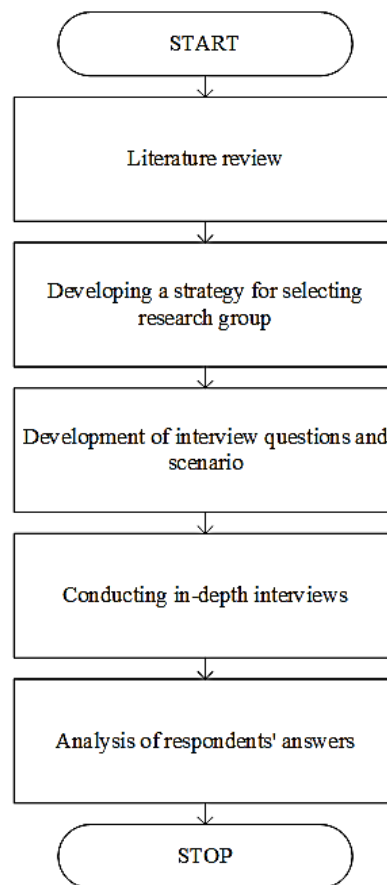


Figure 2. Research procedure.

Source: own elaboration based on: (Miński, 2017).

The first stage of the research procedure concerns the theoretical part of this article. The author conducted a literature review focusing on the area of User Experience, requirements engineering and project management in organizations. The systematisation of the main concepts in the chosen topic was the result of this stage.

The second stage of the procedure begins the empirical part of the article and consists in developing a strategy for selecting research group. Purposive selection was chosen by the author. The interviewees fulfil a specific criterion, which is their profession: they are User Experience (UX) designers in IT organizations.

The third stage of the procedure revolves around the development of the thematic blocks and the interview scenario. The author asked the interviewees questions on specific topics related to User Experience design, which will be presented later in the article.

The fourth stage of the research procedure is to conduct in-depth interviews with the respondents. The interviews took place via Microsoft Teams, Zoom and Google Meet platforms, depending on the respondents' preferences.

The final stage of the research procedure is the analysis of the respondents' answers. This is the subject of the next section of this article.

4. Analysis of the results of the conducted interviews

When analyzing the answers given by the in-depth interviewees, it is important to start by presenting the key data of the interviews. The in-depth interview was conducted between August and November 2022. A total of 10 people were interviewed. According to the selection strategy of the research group, they were people working as User Experience (UX) Designers in IT companies. The designers had different levels of seniority in the position, ranging from six months to four years (Figure 3).

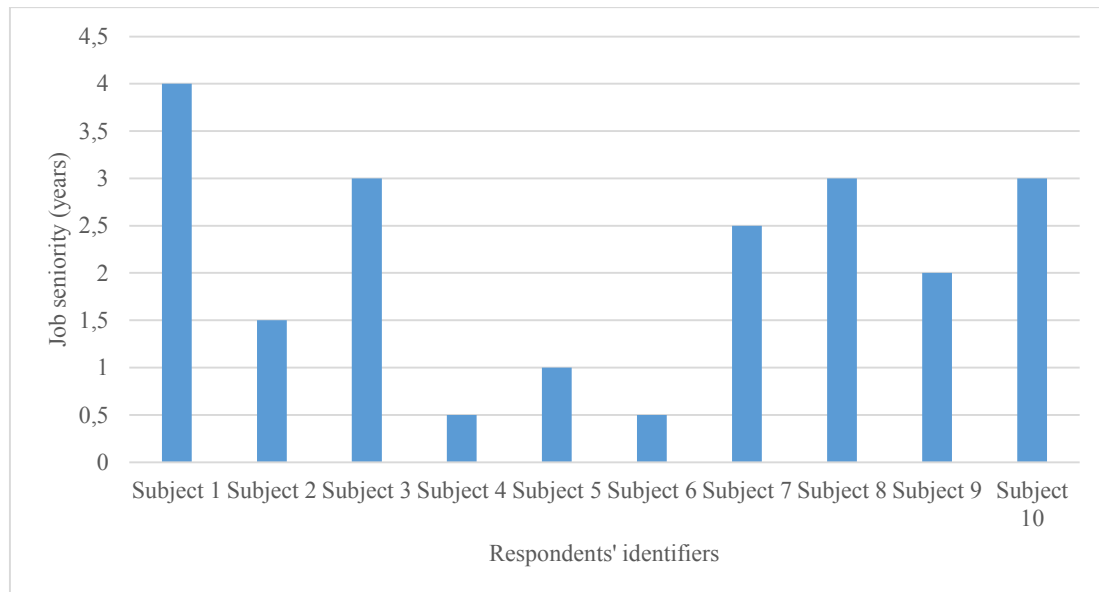


Figure 3. Job seniority of User Experience designers (in years).

Source: own elaboration.

The split between UX and UI designers was the first topic the author addressed in the interviews. Six interviewees stated that there is a UX/UI designer position in the companies they work for. Three interviewees answered that these are separate positions in the organization. One respondent working in two companies stated that one company has two separate positions, and the other performs both UX and UI designer tasks (Table 1).

Table 1.*Split of the UX/UI position in the respondents' organization*

Topic	UX/UI - is it separated in the organization?
1.	It is one person. The UX designer must also have UI skills.
2.	In one company - UX and UI - it is two people. In another company it is one person.
3.	It depends on the project, usually it is one person.
4.	It is one person, but sometimes one person does UX tasks, and one person does UI tasks.
5.	It is two people - UX designer and UI designer.
6.	It is one person.
7.	UX/UI designer is one person. I think it should be separated.
8.	UX/UI is one person.
9.	It is split into two separate positions.
10.	There are two positions - UX designer and UI designer.
11.	

Source: own elaboration.

The vast majority - eight designers - say that UX/UI positions should not be separated. They claim that a UX designer without UI skills will not do their job properly and vice versa. One respondent also states that the work they do has more to do with User Interface than User Experience. This is because clients do not want to spend money on research. Respondents also emphasize that a designer does not need to be a specialist in both areas. However, they should be familiar with aspects of both UX and UI. The split of the position is appreciated by two respondents. They have research skills and are not necessarily interested in the graphical aspects of interface design.

The second block of topics was the essence of currently popular design system. Respondents were asked for their opinion on design system - does it limit the designer's creativity or is it essential in today's organization. All the respondents were of the same opinion about the validity of having a design system (Table 2).

Table 2.*Evaluation of the design system concept*

Topic	Design system - kills creativity or is it necessary?
1.	A design system should be created, but the designer should also be able to create his or her own components.
2.	A component database is necessary because it speeds up the designer's work.
3.	Design system allows to maintain integrity in projects.
4.	It is essential - many people work on a project and the application needs to be consistent.
5.	The design system is a big help - the designer is not an artist, but a contractor of a specific product for the client.
6.	Design system is a very good option - the designer has a ready-made set of components; everything is clear to the developer and the designer.
7.	We don't have a design system and I think this should be changed.
8.	Design system can make the UX designer's job easier when he or she uses it correctly.
9.	Design system is essential and definitely helps the designer. I think it will become a standard.
10.	I think it is a necessary element in an organization - it takes time to develop it correctly, but the integrity in the design is worth it.

Source: own elaboration.

Designers consider the design system to be a great convenience in their work, which allows them to maintain consistency in a project on which more than one person is working. Respondents also pointed out that a good UX designer should not be limited to components from the design system, as this can result in low-quality projects and, ultimately, professional burnout if his or her work is based solely on inserting ready-made components.

The next thematic block dealt with designers' problems in the area of communication with the client. At this stage, designers highlighted various elements of communication that can be problematic (Table 3).

Table 3.

Problems identified in the area of customer communication

Topic	Communication with the client
1.	Clients do not understand the mock-up stage.
2.	Problem with time, arranging meetings.
3.	Customer should be aware that once they accept wireframes, it will be difficult to make changes later.
4.	Consultation with the client at the low-fidelity prototyping stage is essential.
5.	The customer adds more work not in line with the contract.
6.	Gathering requirements from the customer is problematic.
7.	Lack of ability to do research outside the client organisation.
8.	Client does not want to invest in research.
9.	Client makes changes to the project after research has been carried out.
10.	Client has very high expectations - I need to get to know them and understand what they really want.

Source: own elaboration.

Clients' lack of understanding of the mock-up phase is one of the problems identified by designers. UX designers organize a meeting where they present wireframes/low-fidelity prototypes to the client. The result of such a meeting should be client acceptance of the prototypes. During the meeting, the client has the opportunity to ask questions, have suggestions for changes, or talk about their concerns. Some time later, the designers meet again to present the high-fidelity prototypes to the client, incorporating the changes made at the earlier meeting. At this stage, the client often realizes that they had imagined it differently and asks for changes, which can take a lot of time at this stage of the project.

The second problem is gathering requirements from clients. Respondents say that the client can change the requirements within a week after the designers have done some of the design work. Changing requirements leads to design changes. This lengthens the whole project process. There is also the issue of scheduling meetings with clients. Clients often cancel meetings due to lack of time.

Among the problems related to communication with clients, respondents also mention a lack of willingness to allocate funds for research. Usually, clients come to the organization with ready-made research results. Designers note that sometimes these requirements have been written without any research with users. Designers do not know the real cause of the problem, the need for the solution. They are forced to formulate reasons that may not be applicable in practice.

The last block of topics in the interview were the problems encountered during the design process in the organization. As in the case of communication problems with the client, the interviewees distinguished different problem areas (Table 4).

Table 4.
Problems during the design process in an organization

Topic	Problems during the design process in an organization
1.	Lack of in-house research.
2.	Implementation process starts during design.
3.	Testing on final prototypes.
4.	Lack of opportunity to test with users.
5.	Lack of clear way of creating documentation; no trainee supervision.
6.	Lack of testing with users.
7.	Lack of precise information about the commissioned task; no contact with developers.
8.	Initial stages perform based on user's own perceptions.
9.	Organization of tests with users.
10.	I think the worst is the beginning and end of the project.

Source: own elaboration.

Among the problems in this area, respondents point to the lack of opportunities for user testing. Furthermore, testing is often only carried out on final prototypes, and designers would like to be able to test wireframes as well. In addition, respondents again point to the problem of not being able to do their own research, which leads them to carry out part of the design process based on their own ideas.

One interviewee described the beginning and end of a project as the most difficult stages for UX designers. At the beginning a lot of different information must be taken in, the designer must focus on what value the product is going to generate for the customer. The designer then needs to communicate all this information to other team members. The end can also be a challenge when all the work must be handed over to the developers and provide them with carefully described files, mock-ups. Referring to the developers, the respondent also points to the lack of contact with the developers during the design process. Another related problem concerns the start of the implementation process already during the design process. The designer does not know the technical constraints, if a lot of changes occur, the team wastes a lot of time, and the company generates additional costs. Furthermore, the lack of a clarified way of creating documentation can also cause problems within the design team, both between designers and between the designer and developer.

Respondents also pointed out inaccurate information in the tasks assigned by the Product Owner. First, the designer needs information about the cause of the problem, then he or she will know how to solve it. At the stage of describing tasks, the Product Owner should precisely define the problem and its cause before assigning the task to the User Experience designer. UX designers also mention the lack of support in organizing the research from the company. The organization wanted to allocate as little money as possible to the research, so that in the end the research did not take place at all.

A significant problem in the organization indicated by one respondent is the lack of supervision of the intern. The User Experience designer indicated that no one supervised his projects, and the intern was obliged to organize meetings with the client and present designs, having no practice in this area.

The author's in-depth interviews with User Experience designers identified the needs of User Experience designers in organizations.

5. Discussion & conclusions

The research conducted for this article allowed the author to answer the main research question: What are the needs of User Experience designers in organizations? During the interviews, most of the designers' needs were identified in the area of the design process in the organization. User Experience designers' needs included the ability to conduct their own research and to improve communication between team members in the organization. In addition, novice User Experience designers should have the opportunity to interact with someone with more experience in this field within the organization. In formulating a detailed answer to this question, the author was helped by the supporting questions developed:

(RQ1) What are UX designers' preferences in the area of splitting the User Experience/User Interface designer position? Most respondents appreciate the lack of split of the UX/UI designer position. Designers believe that a good designer should have knowledge of both UX and UI to perform well.

(RQ2) What are the needs of User Experience designers in terms of communication with clients? Designers need regular meetings with the client. The client should also understand the different stages of the design. Systematic meetings allow designers to review each stage of the design experience and clients to understand the specifics and purpose of these stages.

(RQ3) What are the needs of User Experience designers regarding the design process in the organization? User Experience designers want to be able to do their own research to ensure that the user has a positive experience when using the product. In addition, designers feel the need to be in constant contact with developers to be aware of technical constraints in the designed solution. Among other needs, the author also highlights the need to receive accurate information from the Product Owner, including the cause of the problem the designer needs to solve.

(RQ4) How do User Experience designers evaluate the design system concept in the organization? User Experience designers feel that there is a need for a design system in the organization that ensures consistency in design and makes the work of designers and developers easier.

In future research, the author would like to conduct in-depth interviews with User Experience designers from other countries and make a comparative analysis of the collected results.

References

1. Aarlien, D., Colomo-Palacios, R. (2020). Lean UX: A Systematic Literature Review. *Computational Science and Its Applications – ICCSA 2020. Lecture Notes in Computer Science()*, vol 12254. Cham: Springer. doi: 10.1007/978-3-030-58817-5_37.
2. Allam, A.H., Razak, A., Hussin, C., Dahlan, H.M. (2013). User Experience: Challenges and Opportunities. *Journal of information systems research and innovation*, pp. 28-36.
3. Ambreen, T., Ikram, N., Usman, M., Niazi, M. (2018). Empirical research in requirements engineering: trends and opportunities. *Requirements Engineering*, 23(1), pp. 63-95. doi: 10.1007/s00766-016-0258-2.
4. Babich, N. *What You Should Know About User Experience Design*. Retrieved from: <https://xd.adobe.com/ideas/career-tips/what-is-ux-design/>, 30.01.2023.
5. Brown, D. (2012). *Agile user experience design: a practitioner's guide to making it work*. Newnes.
6. Carrillo De Gea, J.M., Nicolás, J., Fernández Alemán, J.L., Toval, A., Ebert, C., Vizcaíno, A. (2012). Requirements engineering tools: Capabilities, survey and assessment. *Information and Software Technology*, 54(10), pp. 1142-1157. doi: 10.1016/j.infsof.2012.04.005.
7. Chakraborty, S., Sarker, S., Sarker, S. (2010). An exploration into the process of requirements elicitation: A grounded approach. *Journal of the Association for Information Systems*, 11(4), pp. 212-249. doi: 10.17705/1jais.00225.
8. Fanguy, W. *A comprehensive guide to design systems*. Retrieved from: <https://www.invisionapp.com/inside-design/guide-to-design-systems/>, 30.01.2023.
9. Farooqui, T., Rana, T., Jafari, F. (2019). *Impact of human-centered design process (HCDP) on software development process*. 2nd International Conference on Communication, Computing and Digital systems (C-CODE), IEEE, pp. 110-114.
10. Fessenden, T. *Design Systems 101*. Retrieved from: <https://www.nngroup.com/articles/design-systems-101/>, 30.01.2023.
11. Furniss, D., Curzon, P., Blandford, A. (2018). Exploring organisational competences in Human Factors and UX project work: managing careers, project tactics and organisational strategy. *Ergonomics*, 61(6), pp. 739-761. doi: 10.1080/00140139.2017.1405081.
12. Gabbard, J.L., Hix, D., Swan, J.E. (1999). User-centered design and evaluation of virtual environments. *IEEE computer Graphics and Applications*, 19(6), pp. 51-59.

13. Gothelf, J., Seiden, J. (2021). *Lean UX: Designing Great Products with Agile Teams*. O'Reilly Media, Inc.
14. Hartson, R., Pyla, P.S. (2018). *The UX book: Agile UX design for a quality user experience*. Morgan Kaufmann.
15. Hassenzahl, M., Tractinsky, N. (2006). User experience - A research agenda. *Behaviour and Information Technology*, 25(2), pp. 91-97. doi: 10.1080/01449290500330331.
16. International Organization for Standardization. *Ergonomics of human-system interaction — Part 210: Human-centred design for interactive systems (ISO 9241-210:2019)*. Retrieved from: <https://www.iso.org/obp/ui/#iso:std:iso:9241:-210:en>, 30.01.2023.
17. Karat, J. (1997). Evolving the scope of user-centered design. *Communications of the ACM*, 40(7), pp. 33-38.
18. Kraft, C. (2012). *User experience innovation: User centered design that works*. Apress.
19. Krug, S. (2013). *Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability*. New Riders.
20. Lamprecht, E. *The Difference Between UX and UI Design – A Beginner's Guide*. Retrieved from: <https://careerfoundry.com/en/blog/ux-design/the-difference-between-ux-and-ui-design-a-laymans-guide/>, 30.01.2023.
21. Ławniczak, M. (2022). Znaczenie koncepcji czarnych łabędzi w zarządzaniu współczesnym przedsiębiorstwem. In: A. Jaki, B. Ziębicki (Eds.), *Doskonalenie i adaptacyjność organizacji w obliczu współczesnych wyzwań* (pp. 11-21).
22. Lowdermilk, T. (2013). *User-centered design: a developer's guide to building user-friendly applications*. O'Reilly Media, Inc.
23. Łuczak, K. (2022). Identyfikowanie wymagań użytkowników jako podstawa projektowania User Experience. In: H. Dudycz (Ed.), *Informatyka w biznesie* (pp. 79-88). Wydawnictwo Uniwersytetu Ekonomicznego we Wrocławiu.
24. Mara, A., Jorgenson, J. (2015). Mutt Methods, Minimalism, and guiding heuristics for UX project management. *International Journal of Sociotechnology and Knowledge Development*, 7(3), pp. 38-48. doi: 10.4018/IJSKD.2015070103
25. Miński, R. (2017). Wywiad pogłębiony jako technika badawcza. Możliwości wykorzystania IDI w badaniach ewaluacyjnych. *Przegląd Socjologii Jakościowej*, 13(3), pp. 30-51. doi: 10.18778/1733-8069.13.3.02.
26. Mościchowska, I., Rogoś-Turek, B. (2019). *Badania jako podstawa projektowania User Experience*. PWN.
27. Nielsen, J. *A 100-Year View of User Experience*. Retrieved from: <https://www.nngroup.com/articles/100-years-ux/>, 30.01.2023.
28. Norman, D. (2013). *The Design of Everyday Things*. MIT Press.
29. Puto, A. (2022). Wybrane aspekty zarządzania projektami w polskich przedsiębiorstwach. In: A. Puto (Ed.), *Dylematy i wyzwania w zarządzaniu współczesnym przedsiębiorstwem* (pp. 54-64). Wydawnictwo Politechniki Częstochowskiej.

30. Rose, E.J., Björling, E.A., Kim, A., Alvarez, N.Y. (2018). *Usability testing with teens: Adapting human-centered design and UX methods*. Proceedings of the 36th ACM International Conference on the Design of Communication, pp. 1-6.
31. Schwartz, L. (2013). *Agile-User Experience Design: an Agile and User-Centered Process?* Proc. the 8th International Conference on Software Engineering Advances, pp. 346-351.
32. Sepioło, J., Olszowy, J., Kucwaj, A. (2022). Koncepcje zarządzania współczesnym przedsiębiorstwem - teoria i praktyka. In: J. Sepioło, J. Olszowy (Eds.), *Współczesne wyzwania w naukach ekonomicznych, finansach i zarządzaniu* (pp. 31-42).
33. St. Peter, H.A.S. (2015). Communicating user experience: “wicked” problems, patchwork personas, and the ICTD project lifecycle. *International Journal of Sociotechnology and Knowledge Development*, 7(2), pp. 14-26. doi: 10.4018/IJSKD.2015040102.
34. Sutcliffe, A., Sawyer, P. (2013). *Requirements elicitation: Towards the unknown unknowns*. 21st IEEE International Requirements Engineering Conference, RE 2013 - Proceedings, pp. 92-104. doi: 10.1109/RE.2013.6636709.
35. Vesselov, S., Davis, T. (2019). *Building Design Systems: Unify User Experiences through a Shared Design Language*. Apress.
36. Zowghi, D., Coulin, C. (2005). Requirements Elicitation: A Survey of Techniques, Approaches, and Tools. In: A. Aurum, C. Wohlin (eds.), *Engineering and Managing Software Requirements*. Berlin-Heidelberg: Springer. doi: 10.1007/3-540-28244-0_2.