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ANALYSIS OF SELECTED MOBILE APPLICATIONS FROM THE PERSPECTIVE OF SENIORS

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Nowadays, users of mobile technologies expect solutions which ensure interaction and accessibility of information. Expectations of seniors in terms of using mobile applications certainly differ from those of young people. There are many mobile apps on the market, such as banking, navigation, communication or medical ones. Only some of them are dedicated directly to seniors, who use modern technological solutions, especially financial ones, least often. The lack of knowledge and the fear of new technologies can be listed as principal barriers to it. However, the attitudes to mobile technologies in this age group evolve year by year. The purpose of this article is to present the assessment of selected mobile apps from the perspective of seniors. A face-to-face questionnaire and value network analysis by Verna Alee are going to be the applied research methods.

Keywords: mobile applications, value networks

1. INTRODUCTION

In the context of a developing information society and gradual transfer of most human activities into cyberspace, the use of ICT is becoming one of the basic skills which ensure effective satisfaction of one's needs, self-fulfillment as well as social integration. Technological revolution, computerization, use of cell phones and mobile solutions have transformed everyday life in Poland. Aging does not have to necessarily imply abandoning of all social activities, including media-related ones. Faced with the dynamic development of electronic media, especially interactive multimedia, it is becoming vital to ensure seniors decent and fully satisfying lives in their old age (Wrońska, 2016, 249).

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Nowadays, seniors do not confine themselves to the knowledge of basic functions of a mobile phone or ability to use email. Currently, the group of mature consumers wants to take full advantage of opportunities offered by the 21st century's technology to follow their passions and contact their family and friends in real time (Mobileclick, 2019).

According to the results of Z. Pietrasiński's research, intellectual and physical passivity poses a serious threat to so-called 'third age' people as it accelerates the aging process. Therefore, it is important to stimulate seniors' minds among others through multimedia, which not only provides the elderly with the necessary information but also lets them contact their families, follow their passions, educate and entertain themselves. It facilitates seniors' full participation in social activities, enhancing the quality of their lives (Wrońska, 2016, 250). Digital data transmission (digitalization) is characteristic of contemporary multimedia. Its other distinguishing features are as follows: asynchronicity – data transmission can be stored and received at any moment; hypertextuality – combining of content by means of a network of logical relations which facilitate continuous flow of related information; spatiotemporal compression; multi- and hypermedia character; globality (deterritorialization) and mobility (miniaturization) (Wrońska, 2016, 251).

Expectations of seniors in terms of using mobile applications certainly differ from those of young people. The purpose of this article is to present the assessment of selected mobile apps from the perspective of seniors. A face-to-face questionnaire and value network analysis by Verna Alee are going to be the applied research methods.

2. THE SIGNIFICANCE OF MOBILE APPS TO SENIORS

According to Pawełoszek-Korek (2009), mobile technology is a field dealing with the manufacturing of mobile products, which means that they can be used in motion (Pawełoszek-Korek, 2009, 30). The characteristics of mobile technologies creating added value to their users are as follows (Pawełoszek-Korek, 2009, 58):

- omnipresence (users can receive up-to-date information and carry out a transaction in real time),
- customization (apps should be adapted to users' needs, the relevance of content is therefore important),
- flexibility (users can join in activities at a time of their convenience),
- localization (users have an access to local news websites).

Nowadays thanks to, among others, mobile information technologies, significant changes in the relations of enterprises with their customers can be observed. The process, called "from information asymmetry to information democracy" by Kotler, is being reinforced (Sznajder, 2014, 22). Digital technologies eliminate the

lack of balance in terms of the access to information between manufacturers/sellers and consumers, whereas the access to information is even faster.

The most popular mobile applications keep expanding their reach, however, we can also observe a trend among consumers of mobile content a switch from mobile applications to browsers (Mobi, 2018, 5). According to the forecasts, the development of the mobile market is going to be stimulated with an increasing number of smartphones, which is going to rise from 3.9 to 6 billion in 2022 (<https://socialpress.pl>).

More and more people over 60 use mobile technologies. However, a significant part of them is still fearful while dealing with new technologies. The fact that they do not realize the benefits of owning a smartphone is also an important factor. Most mobile apps are dedicated to various age groups, including seniors. When it comes to selected mobile applications for persons over 60, we can mention certain navigation apps, such as “Jakdojade”, banking ones, such as “IKO” and medical ones, such as “MyTherapy”. The latter is specifically dedicated to seniors.

3. APPLIED RESEARCH METHODS

The research was carried out among seniors (10 persons over 60). The study group included 8 women and 2 men, all of them inside the labor force. In the first part of the research, those questioned were asked to complete a short survey concerning the use and knowledge of mobile applications, then selected mobile apps (Jakdojade, My Therapy, IKO) were presented to the study group. After having tested the selected mobile apps, those questioned were asked to assess them. The survey questionnaire was the applied research tool. The cooperation with such a small study group was justified by the desire to form a suitable assessment team. The procedure of the carried out research was as follows:

- the selection of those questioned (they had to meet criteria concerning their age, experience in using mobile apps and possibility to use a smartphone with Internet access),
- testing of selected mobile apps (downloading them on the smartphones and using their functions),
- the assessment of mobile apps by means of the questionnaire.

The survey concerning the assessment of applications consisted of questions on their content, navigation and structure, possibility to interact, layout (graphic elements of a given app, including colors, font, content arrangement on the site) and graphics, possibility to enter data and usefulness.

The second part of the research was based on the value network method by Alee in order to analyze the value of applications. The idea of the value exchange according to Alee is based on the assumptions that network participants and stake-

holders get involved in the value network by converting the value of their impact on other parties into the growth of their tangible and intangible assets (Kubiak, 2011, 79). According to the concept of value networks by V. Alee there are two types of flows between the parties: income (received values) and expenditure (supplied values) (Alee, 2000, 4). At the same time, within the framework of income and expenditure, there is a traditional exchange in the form of material values and in the form of intangible assets. Material exchange includes goods, services and income. It also contains all transactions involved in the exchange. Knowledge products and services that generate income, or those which are anticipated, and which are purchased as part of a service (e.g. reports), are all defined as the tangible ones (Alee, 2003, 182).

In turn, the intangible values include strategic information, process knowledge, and technical know-how; designing collaboration, joint planning of activities and policy development. Intangible benefits are the advantages or favors, which can be extended from one person or group to another person or group (Alee, 2003, 182).

The value network refers to each establishment of relationships that generates both tangible and intangible value through dynamic, complex exchange between two or more individuals, groups or organizations. People exchange not only goods, services and income, but also knowledge and other intangible assets, such as favors and benefits. Exchange of knowledge and other intangible assets do not only encompass the activities that support the business model, but they also constitute a part of that model. The perception of an enterprise as a value network brings about a better understanding of the business model than its perception as a value chain (Alee, 2003, 192–193).

The analysis of the value network (Alee, 2003, 208–209):

- changes the perspective of business from process engineering to a dynamically living system,
- rewards people as active, intelligent agents, who create value,
- reveals cognitive paths, which are important for the process of knowledge sharing,
- includes emotional exchange, such as favors, and other intangible assets,
- shows the limits of the analyzed system,
- shows all the key players, even those engaged in non-financial transactions,
- shows all the key values supplied along with senders and recipients of each of them,
- shows both tangible and intangible ‘contributions’ for each participant,
- shows all the key transactions,
- combines transactions into sequences to show the time of establishing relationships,
- can reveal important feedback loops of the system,
- can be used at every level of the system,
- creates diagrams,

- can be used for an infinite number of organizational systems (governmental, non-governmental, corporate organizations).

Intangible assets are perceived as assets which can be managed and estimated by using non-financial evaluation forms.

4. ASSESSMENT OF SELECTED MOBILE APPLICATIONS FROM THE PERSPECTIVE OF SENIORS

Ten people (8 women and 2 men) participated in the first part of the research. They were all smartphone users and over 60 (it is necessary due to the purpose of the carried out research). On the basis of analysis of the research results, it was established that all those questioned used smartphones to make phone calls, less often to surf the Internet or to use mobile apps. The further questions referred to the number, type and frequency of downloading of mobile applications. Those questioned use one to five applications at least once a week. Weather, map and news applications were listed among the most commonly used. Only one person from the study group uses social media. Those questioned download apps less often than once a month, some of them once a year. In most cases, those questioned have downloaded 1 to 3 apps a year. The last question concerned the most important features of applications from the perspective of their users, ranging from the content of the website, navigation and structure, possibility to interact, layout and graphics, possibility to enter data to usefulness of a given application. All those questioned chose the usefulness of an app, while among the most common reasons limiting their use of mobile apps they mentioned their fear of technologies and insufficient knowledge of mobile applications.

In the following part of the research, the same study group assessed applications such as “Jakdojade”, “MyTherapy” and “IKO” in terms of their interface (the form of information presentation in the mobile app and interaction with the user) and functionality, using the scale from 1 (insufficient) to 5 (very good).

“Jakdojade” shares exhaustive and up-to-date spatial information combined with descriptive attributes with users of urban space. It is a browser of public transport connections. It allows its users to plan their route, taking into account changing to different means of transport and modifications of timetables. The planner makes it possible to determine the starting point and the destination as well as some additional details of the journey, such as on which stop to get on and where to change. The information is published in real time since the system immediately takes into account any changes to the public transport system functioning. The storage of timetables and the search for connections takes place on servers and in databases of CITY-NAV sp. z o.o company. The users can access them through the website, the mobile version and the native application, which can be used via cell

phones. The application is responsive, which eliminates problems with adapting to different resolutions of mobile devices' screens. "Jakdojade" in its mobile version, apart from the dedicated visual identity and clear layout, is available in 5 languages (Polish, English, Japanese, French and German) (Kubiak, Skawińska, 2015, 190). The app is popular in most Polish cities.

The first area of assessment of "Jakdojade" concerned its content. Those questioned assessed it as good (dominant score 4). The content is thus comprehensible and interesting to users while its naming convention is consistent. The following area concerned its navigation and structure. Those questioned also rated it as good (dominant score 4). In their view, by means of the app, all the necessary information is easily and quickly accessible. The features of the screen facilitate navigation, the return to the starting point is quick, the application is fully operable, its structure is carefully planned and consistent, while the information is grouped and clearly arranged. The instructions and the easiness to find help within the app's website were described as good. However, the fact that it is not always easy and sometimes time-consuming to access all the information was given the worst rating, whereas the possibility to interact was rated as sufficient (dominant score 2.0). According to those questioned, the app does not facilitate the exchange of information. The fourth area concerned the layout and graphics. Those questioned assessed it as good (dominant score 4). The graphics is thus adapted to be displayed on mobile devices of various resolutions, the font is legible, the texts are clear while the colors and graphic elements are interesting to users. The possibility to enter data was rated as sufficient (dominant score 2). The application allows users to rate and post comments only to a limited extent. The usefulness of the app, which is a particularly significant assessment area, was described as very good (dominant score 5). The application is thus helpful within the scope of its intended use, it encourages consumers to use it again, enhances their knowledge and is worth recommending.

The following application discussed in the article is "MyTherapy", a medical app. It allows its users to keep track of medication taking, run a medical record, control their weight and observe mood alterations. It also informs patients when they should buy prescribed drugs. Its most essential functions are as follows: drafting medicines lists along with the information on the dosage and reminders (e.g. on how often and how much they should take it), offering a broad range of drugs and measurements adapted to various situations, the so-called Team function – getting family and friends involved in monitoring the patient's condition, possibility to print a monthly pdf report in order to share the information with the doctor and control the recovery more efficiently. The app is free of charge and does not require users to register, whereas their data is not disclosed to third parties.

The first area of assessment of "MyTherapy" concerned its content and was rated as very good (dominant score 5). The texts are comprehensible for users, the naming convention is consistent and the content is interesting. The second area of assessment, namely navigation and structure, was also assessed as very good

(dominant score 5). According to those questioned, the screen features facilitate navigation, the information is clear, grouped and can easily be seen. The possibility of interaction was described as very good (dominant score 5). Those questioned pointed to the possibility of information exchange and clarity of supplied messages. The area concerning layout and graphics was also given the top rating (dominant score 5). Those questioned particularly appreciated the distinct colors, interesting graphic elements, legible font and clear text. The app is also featured with the function of entering information through rating and posting comments (dominant score 4). One of the vital areas, namely the usefulness of the application, was assessed as very good (dominant score 5). The application is very helpful within the scope of its intended use, encourages consumers to use it again, lives up to their expectations and enhances their knowledge. The overall assessment of “MyTherapy” according to the users is very good. The application is therefore customized to the needs and expectations of the target group.

“IKO” is another mobile application. It is used for online banking. It facilitates the performance of basic transactions in bank accounts, domestic and international transfers, handling of cards, loans, deposits and insurances. It has got many additional functions and can be used in 4 languages.

The assessment area concerning the content of “IKO” was described as good (dominant score 4). According to those questioned, the naming convention is consistent. The navigation and structure was also assessed as good (dominant score 4). According to those questioned the information is grouped, clearly arranged and can easily be seen along with the hints. The possibility to interact was assessed as sufficient (dominant score 2). Those questioned pointed to the scarce possibility to exchange information within the application. However, the layout and graphics were rated as very good (dominant score 5). The application’s colors are compatible with those of the bank while graphic elements are interesting and customized. The application allows users to enter information, however, it does not facilitate their transmission. The usefulness of the app was described as satisfactory (dominant score 3). This assessment may result from the low popularity of banking applications among seniors since this group is accustomed to making payments in a traditional way. In order to persuade seniors to use mobile banking, it is necessary to overcome psychological barriers concerning the security of this service and show the benefit it brings to its users.

The medical application “MyTherapy” was given the best rating. This app is specifically dedicated to seniors as it allows them to collect necessary information on their health.

The following part of the research consists of the analysis of the value of mobile applications for seniors. The method of value network by Verna Alee was used in this part in order to define values supplied and received by seniors as a result of using mobile apps. Seniors hand over information and financial means (in case of paid applications) to mobile app providers, they enhance the prestige of the company (app provider) in terms of care for seniors’ needs and share their opinions.

In return, they receive information and can enjoy trendiness (following trends) and brand trust. Close relatives (family, grandchildren) and occasionally employers are activators of this exchange. An example of value exchange has been illustrated in Figure 1.

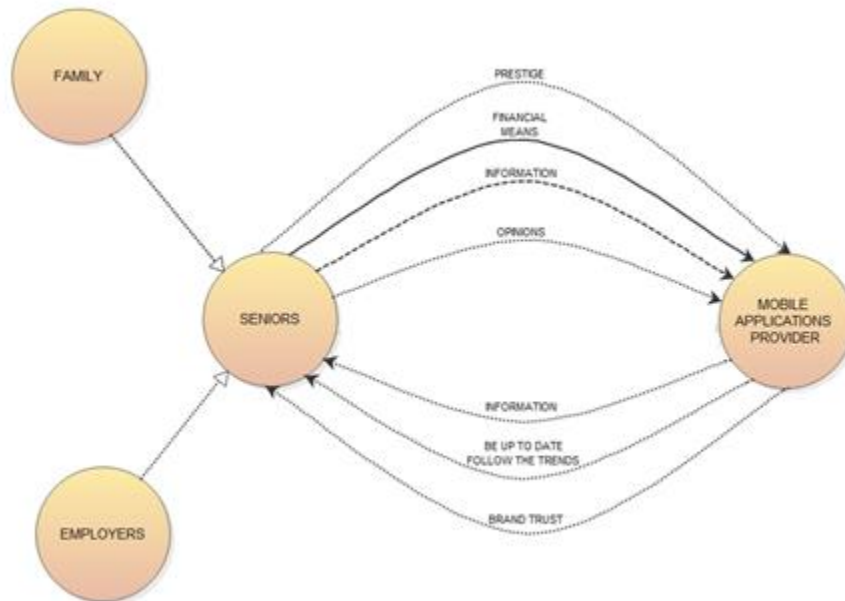


Fig. 1. Value exchange between seniors and mobile app providers. Author's own

The above-mentioned network is therefore highly intangible since only one in seven flows is tangible (financial means). It is worth noting that the tangible factor appears in the case of a paid application while the vast majority of the applications are free.

5. SUMMARY

Seniors are the least “tech-savvy” group and use fewer mobile apps, particularly financial ones, than average Poles. New technologies are a barrier to them, mainly due to the lack of skills to use them. This group is characterized by a low level of trust in online banking and the concern for security while using innovative services. Undoubtedly, this group is more and more frequently interested in such solutions. Seniors use mobile apps in order to follow trends, to be up-to-date, fulfill their passions and contact their relatives in real time.

The number of applications dedicated to seniors is scarce compared with what is offered to twenty-year-olds. However, a few basic topic categories can be distinguished among solutions available on the market, i.e. communication, health, as well as apps making everyday life and using smartphones easier. Mobile app providers should pay attention to the opinions of this age group more and more frequently as applications targeted at young people should differ from those dedicated to seniors.

LITERATURE

- Alee, V. (2000). Reconfiguring the Value Network. *Journal of Business Strategy*, 4, 21, 4.
- Alee, V. (2003). *The future of knowledge*. Burlington: Elsevier.
- <https://socialpress.pl/newsroom/dokad-zmierzaj-rynek-aplikacji-mobilnych> (14.05.2019).
- Kubiak, K. (2011). Wykorzystanie sieci wartości podczas analizy przepływu wiedzy. *Zarządzanie wartością przedsiębiorstw. Zeszyty Naukowe Uniwersytetu Szczecińskiego*, 686, 79–89.
- Kubiak, K., Skawińska, A. (2015). Przedsiębiorstwa high-tech w kreowaniu nowych rozwiązań aplikacji mobilnych. *Cyfryzacja i wirtualizacja gospodarki. Zeszyty Naukowe Uniwersytetu Szczecińskiego*, 852, 185–192.
- Mobi (2018). Report: Polska jest. <http://jestem.mobi/2018/04/raport-polska-jest-mobi-2018-do-pobrania/> (14.05.2019).
- Mobileclick (2019). *Silver Tsunami jakie są potrzeby mobilnych seniorów*. <https://mobileclick.pl/silver-tsunami-jakie-sa-potrzeby-mobilnych-seniorow-czesc-2/> (14.05.2019).
- Pawełszek-Korek, J. (2009). *Technologie mobilne w dostarczaniu wiedzy*. Częstochowa: University of Technology Press.
- Sznajder, A. (2014). *Technologie mobilne w marketingu*. Warszawa: Oficyna Wolters Kluwer Business.
- Wrońska, M. (2016). Edukacja mobilna seniorów – na przekór stereotypom. *Humanitas University's Research Papers. Pedagogy*, 13, 249–257.

ANALIZA WYBRANYCH APLIKACJI MOBILNYCH Z PERSPEKTYWY SENIORÓW

Streszczenie

Użytkownicy technologii mobilnych, oczekują obecnie rozwiązań zapewniających interakcję i dostępność informacji. Oczekiwania seniorów w zakresie korzystania z aplikacji mobilnych na pewno różnią się od oczekiwań młodych ludzi. Na rynku istnieje wiele apli-

kacji mobilnych (bankowe, nawigacyjne, komunikacyjne lub medyczne). Tylko niektóre z nich są przeznaczone dla seniorów, którzy najrzadziej korzystają z nowoczesnych rozwiązań technologicznych, zwłaszcza finansowych. Brak wiedzy i strach przed nowymi technologiami można wymienić jako główne bariery w tym obszarze. Jednak stosunek do technologii mobilnych w rozpatrywanej grupie wiekowej z roku na rok ewoluuje. Celem tego artykułu jest przedstawienie oceny wybranych aplikacji mobilnych z perspektywy seniorów. Zastosowanymi metodami badawczymi są wywiad osobisty i analiza sieci wartości Verna Alec.

Słowa kluczowe: aplikacje mobilne, sieci wartości