

SuperBook Concept for a Digital University

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Abstract. Background: Digital content is a key part of a Digital University, which is becoming more relevant to meet the requirements of the digital world. Traditional universities should in fact “reinvent themselves”: they need to switch quickly from the usual focus on managing the learning process (program portfolio) to managing the educational experience of the target audience, whose expectations of the personalized, adaptive and 24/7 format of interaction with the learning system become more natural. **Design/Methodology:** Transformation affects organization, processes, people, including educational content and the ways to present it. The paper reviews the key aspects of a digital university with the main focus on digital educational content and explores different perspectives of the digital content. **Objective:** This paper outlines the generalized model of the digital education and suggests the application of a digital platform for the innovative educational purposes by the example of the idea of the digital “SuperBook” press. **Results:** The authors of the paper propose the concept of an innovative SuperBook web-service, which can be used on the basis of a digital university and can provide great opportunities to students to use digital content. **Conclusion:** The research gives a better insight in transformation process of the educational content. This research can be used as a basis for further transformation to a digital university. An analysis of the current trends of the digital university and the research of the interested parties showed that the SuperBook technology platform will be in demand in the academic field.

Key words: Education, university, press, digital, platform, content.

1 Introduction

The Internet today reaches more and more people around the world. According to statistics, about 4.4 billion people, that is 57.9% of the total population of the Earth, are daily users of the World Wide Web. Moreover, in 2019, Wikipedia is in the top of 5 most visited sites [1]. The popularity of the Internet is not only due to entertaining content and the possibility of social interaction, but also to a huge amount of information, including scientific one. As a result, the interest to paper media is gradually disappearing. Increasingly, they are being replaced by digital resources not only due to their content and convenience, but also to the variety of services that open up almost unlimited possibilities for the user. At the end of 2018, sales of e-books in Russia will grow by 47% - up to 5.3 billion [2].

Modern technologies are necessary for the educational process in order to become more mobile, more informational, more versatile [3]. Despite the high level of independence and expertise of a modern student, he needs and will need a

competent mentor, a trainer [4] who will be able to answer questions that arise during the training process, help to understand, find out and not get lost in the mass of non-constructive and irrelevant sources of information that have been spread over The Internet [5].

Modern problems require modern solutions, therefore, to improve the model of "author - book - expert - reader - student" it is worth turning to the concept of a digital university that is developing now in Western countries. The digitalization of the educational institution provides opportunities for the exchange of accumulated experience and knowledge, provides access to information previously available to the scientific elite only. The necessary transformation of the university involves not only implementation of IT solutions but also optimization of existing business processes, which makes them more flexible and "user friendly" [6]. It should be noted the importance of developing an innovative corporate culture and organization system - a platform for implementation and accepting a new learning format. The transition to the digital economy will provide the university with high popularity among students, a constant influx of talents, thanks to timely satisfaction of their volatile needs, the creation of favorable conditions for scientific and creative activities.

According to experts, the digital revolution is the main educational trend. In a few years, artificial intelligence in education will become a reality, completely displace paper textbooks and "break" the whole methodology of a comprehensive school, which is a compulsory assimilation of material by a student. Another direction in the development of education is online courses, which, unlike artificial intelligence, are already successfully applied in the market, besides they are inexpensive, affordable and can save the internal resources of universities by crowding out the non-creative part of the teaching staff. The third sector of technological change is simulators and virtual reality, which are becoming available and are applied in teaching various skills and specialties [7].

Today an e-book and periodicals should be understood not only as products in the form of files that can be purchased on publisher's sites or electronic book platforms, but also as distribution processes for these products to the target audience, as well as "read-through" processes aimed at obtaining the necessary information quickly and in a convenient way. It should be noted the peculiarity of the existing model "reader - book - author", which consists in incomplete or incorrect understanding by readers of the thoughts of authors when lack of opportunity to ask the author a question of interest and get a one-click answer.

Currently the very role of the "student" in the educational process has undergone significant changes: he is no longer just a passive listener and reader, he wants to participate directly in the process of learning, he is able to conduct a reasoned debate in search of truth [3].

Therefore, when studying special, educational literature, it is not enough for a student to simply take what is written for granted. He wants to ask, find out and understand what directly affects the process of self-actualization. Thus, education is a sphere of human activity perceptible to technological and social progress. Here, the digital revolution is not a progress for the sake of progress, but an actual, modern, up-to-date stage of development.

The main goal of this study is to find a technological platform that will be able, firstly, to aggregate the best Western practices of Digital University, secondly, it will be adapted to the particularities of the Russian higher education institution and the needs of students, and thirdly, it will ensure constant communication between students and authors of educational content. It is assumed that with the help of this digital platform the reader will have the opportunity to contact the author of the material of interest (or subject expert) directly, ask questions he is interested in, and share his opinion. When familiarizing himself with the material, the student receives an "active" status in the process of cognition, and expert contacts with an authoritative opinion.

For the purposes of the study, a comparative analysis of existing educational online practices (content-providers) was carried out, their strengths and weaknesses, barriers to users were determined. The needs of students as the main users of the platform were also studied, based on this, approaches to its creation and methods of monetization were proposed. In addition, a possible prototype of the platform and a list of recommendations for the creation, implementation and usage are described.

Following this introduction, the work is continued in the next Section 2 with Related Works. Section 3 shows a detailed analysis of Digital University trends and usage of the online educational services, the methods of interaction with the digital educational content storage. In Section 4 we discuss the concept and architecture of Digital Press solution, the digital platform for working with educational content proposed for implementation together with authors, experts and other readers (students) of the SuperBook. Section 5 addresses discussion, considering the limitations and further work of the study. Finally, Section 6 summarizes our main conclusions and outlines future work.

2 Related Works

It could be considered, that the emergence of the concept of Digital University comes down to the appearance of distance education. The origins of the concept of distance education date back to the middle of the 19th century [8], however, a global shift towards the implementation and optimization of this process began about fifty years ago, making distance education very relevant today [9].

New educational software systems, such as learning management Systems (LMS) have not only influenced the practices of distance education. These software have also altered the way traditional universities provide on-campus learning, as well as enabling a mix between the two, which is typically known as blended learning [10]. The introduction of digital technology has also brought a plethora of different terms and abbreviations, such as online learning, web-based learning, blended learning, e-learning, learning management systems, computer-aided instruction, computer-supported instruction,

technology-enhanced learning, internet-based training, and virtual learning environments, which to a large extent all fall under a broad definition of distance education [11]. The most recent addition to this group of terms is MOOC [12, 13];

While there is certainly a need for more accurate descriptions of different features of new technology, many of these terms were used without establishing an accepted and authoritative definition and often described several completely different things [14].

We consider in more detail each direction of the Digital University. To do this, we analyze scientific research on this topic.

1. Blended learning – is one of the starting points for the development of the digital transformation in education. In the research of Charles Dziuban, Charles R. Graham, Patsy D. Moskal “Blended learning: the new normal and emerging technologies” the authors discover several outcomes, implications, and possible future directions for blended learning in higher education and conclude that although blended learning preceded modern instructional technologies, its evolution will be inextricably bound to contemporary information communication technologies that are approximating some aspects of human thought processes [15].

Another research «Effects of Using a Blended Learning Method on Students’ Achievement and Motivation to Learn English in Jordan: A Pilot Case Study” aims at investigating the effect of blended learning on the achievement and motivation to learn English of German Jordanian University students. The study sample comprised 34 students who studied English through a computerized program melded with the traditional method, whereas the control group was taught solely by the latter. The analysis of covariance revealed statistically significant differences in achievement between the two groups [16].

2. E-learning is the next step of the Digital University development process. M. Samir Abou El-Seoud, Islam A.T.F. Taj-Eddin, Naglaa Seddiek, Mahmoud M. El-Khouly, Ann Nosseir in the research «E-Learning and Students’ Motivation: A Research Study on the Effect of E-Learning on Higher Education» analyze the use of interactive features of e-learning for the motivation of the undergraduate students for the learning process [17]. In the paper “The Effectiveness of E-Learning: An Explorative and Integrative Review of the Definitions, Methodologies and Factors that Promote e-Learning Effectiveness” the researchers Signe Schack Noesgaard and Rikke Ørngreen research how is the effectiveness of e-Learning defined and measured? What makes e-Learning solutions effective? The paper suggests that applying purely quantitative measures to fulfil predefined learning objectives does not allow researchers and practitioners to discover unexpected and unintended transfers to practice and presents potential sources of error [18].

While blended and online learning is often individual, then the main users of Learning Management Systems (LMS) are Universities. The work “Evaluation of the learning management system using students’ perceptions” provides a quality assessment of the effectiveness of this tool. The participants were asked to write down their perceptions of the experiences they had while using the LMS and classify them based on two categories of "Advantages and Drawbacks" with the further analysis [19].

The detailed description of LMS is given in a paper Cavus “N. Distance learning and learning management systems”. The author has prepared this paper with the aim of giving general information about LMS systems and in addition to describe all the aspects of LMS systems such as their general structure, types, and so on. In particular, the highly popular Moodle LMS system is described in greater detail [20].

Digital media by themselves are not the sector of the Digital University. However, without electronic resources, the very concept of digital transformation would not have been possible. Though first appeared in 1971, digital book technology has evolved especially since 2000s and it is relatively a new research area. Therefore, to better understand this phenomenon, a quantitative survey «Use of digital books at academic level: Perceptions, attitudes and preferences of post-graduate students” research was conducted in 2015 spring term in a state university in Turkey. Additionally, research directions for future implications were provided [21].

In the research “The reading brain in the digital age: The science of paper versus screens” the topic of the digital book is revealed in terms of comparison with the traditional paper. The comparison was made on the psychological, physical and mental effects on humans. As a result, the authors conclude that the paper book is good for long reading. The Digital media are easy to learn, search for information, they are easier for perception due to animation and graphics [22].

3 Digital University and educational content

According to the leading futurologist at the Da Vinci Institute (Colorado, USA) Thomas Frey, an educational company that no one knows about, will have become the largest Internet business by 2030. According to forecasts by Grand View Research, Inc., by 2025, the global online education market will have been able to reach 423.2 billion US dollars according to the estimate [23].

As the key trends in the field of digital education, the authors identified technological effectiveness, personalization, systematicity and a focus on self-education instead of fragmentation. There are precisely these areas of development that have been selected, since they together reflect the directions of innovation in the field of digital education today.

1. Technological Effectiveness. EdTech is actively mastering new technological solutions to improve learning. Technologies will make it possible to “pack” the content attractively, motivate online students, find out the individual approach to organization of training, minimize routine, ensure interactivity, mobility, flexibility and comfort, and receive feedback [24].

As an example, “2U”, an educational platform for distance learning, can be used to attract students and select the most suitable courses for them (out of more than 2000 existing ones) using artificial intelligence and machine learning tools. The company's capitalization for 2017 amounted \$ 1,176 (NASDAQ) [34].

We consider the Research University Higher School of Economics. In 2019, the Higher School of Economics adopted a university development program until 2023, one of the points related specifically to the creation of the Digital University. To ensure the education of a new format, a new generation educational system support system SmartLMS (Learning Management System) has been created that provides support for the training of specialists in all formats and forms of training at a new high level of educational quality. An information model has been created that describes all the elements of the educational process and their interaction [25]. “The ecosystem created at the HSE, in contrast to another office of the next information system, is an intellectual environment for the interaction of all users (students, applicants, graduates, employees, participants in competitions, etc.) with various providers of services and information [26].

2. Personalization instead of mass character. Online educational systems are moving from the principle of “the same content for everyone” to the principle of “unique content for everyone” [24].

In the virtual campus of the University of Spain, Universidad Internacional de La Rioja (UNIR), an automated system has been developed to help teachers make personalized teaching recommendations for students called iLIME. The adaptive system takes into account, along with the level of students' knowledge, the possibilities of their formal and informal learning [28].

Systems providing “active adaptability” include SmartBook, an adaptive digital version of an e-book-based training course implemented by McGraw-Hill Education. SmartBook is a system accessible to users of a netbook or smartphone via a browser or as a mobile application. The system adjusts the educational content to the individual pace of student learning, prioritizing, isolating key concepts of the topic, forcing the user to focus on unlearned content. SmartBook integrates perfectly with various LMS [27].

NUADU has developed an interactive platform "Personalized Learning Environment" with artificial intelligence, aimed at optimizing teachers' working hours, increasing the objectivity of knowledge assessment and motivating students. With the help of NUADA, teachers can easily adjust the level of difficulty, type of exercises in accordance with the skills of individual students. Currently, about 72% of teachers using the NUADU platform report improvements in their daily work. According to NUADU's own research, schools using the platform report a 10-30% increase in student achievement over the first three months [34].

3. Consistency instead of fragmentation. Online educational resources from sites offering training courses and programs are transformed into ecosystems that fuse the interests of online students and universities (2U) and online students and corporations (Udacity).

«Udacity» — is a private educational organization that has made mass free distance learning courses. Number of students amounts to tens of thousands of people [29].

Another major platform is “edX”, a major provider of open online courses based on Harvard University and Massachusetts University of Technology. This platform provides university-level online courses in a wide range of disciplines, and also conducts research in the field of education based on how people use the platform [30]. The XuetangX educational platform, founded in 2013 by Tsinghua University, has over 1900 courses from many top-notch universities. The platform provides an online channel for the exchange of experience, research and scientific development [31].

A similar research platform is ResearchGate, which facilitates research through communication — the user can ask colleagues who are interested in similar tasks [32].

4. From traditional teaching (teacher-student) to self-education. The penetration of online learning into the traditional education system is becoming more widespread. The country features of learning and the traditional model of knowledge transfer from teacher to student are blurred. Today, the student himself can choose what, how, in what rhythm, from whom to learn. With the accumulation of success stories of online students (successful careers, business development, income growth, etc.), the value of a culture of self-development and self-education will increase, and along with this, the demand for online education will increase.

The manifestation of this trend is expressed in the growing segment of education peer-to-peer (P2P) training or peer-to-peer education. This is a relatively new paradigm of educational activity, based on the idea of mass cooperation, the ideology of open educational resources, in combination with the network organization of interaction between participants.

Ecole 42, a college of programming in France, is an example of an institution that is fully functioning on the principles of P2P and a digital university. Education here is completely free, entrance exams are necessary to test the logical thinking of the student and knowledge of the language. The main principle of learning here is the lack of teachers, and the learning process is similar to a gaming platform. All tasks are provided by a computer system, and the students like you check your tasks. Such a process stimulates a constant search for information, communication with neighbors, and the development of mental activity [33].

In Russia, there is an analogue of Ecole 42 - School 21. The essence of the program is that the student is trained independently, without any curriculum. To succeed, students should work in a team, share information, be alternately a student or a trainer. This approach helps to maximize the creative abilities of students while working on projects”[34].

4 SuperBook Concept

Identified trends (technological effectiveness, personalization, systematicity, self-learning) say that in the near future we can expect avoiding traditional forms of education, transferring many courses, including university ones, to online mode, which will require the transfer of all educational materials to a digital platform.

As a part of this study the authors propose a new format for the exchange of knowledge and the development of a platform product for active readers (students) and communicative authors (or experts in various subject areas), which will allow discussing questions during reading, receiving answers and advice from authors or experts. The platform matches the concept of a Digital University and can complement any existing electronic literature platform, such as Amazon (www.amazon.com), LitRes (www.litres.ru) or a university electronic library.

The main question posed by the authors of the study: what features and functionality should have such a digital platform in order to attract the maximum number of users and ensure the quality of services. To do this, the interests of consumers and producers of educational services were analyzed.

4.1 Interests of Consumers and Manufacturers of Educational Services

The needs to use services to work with literature and other types of the digital content can be classified into various types¹:

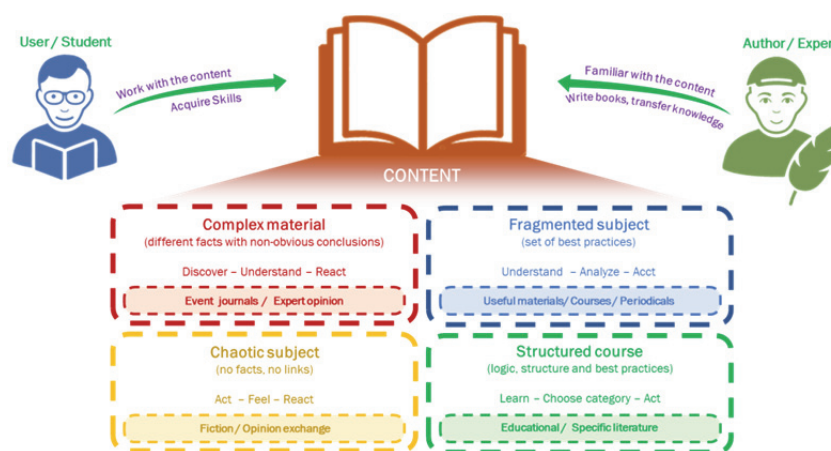


Fig 1 – Types of subjects and paths to knowledge

Educational / special literature (structured subjects). Readers have questions about the material, how to apply the recommendations of the author. Authors (or subject experts who are interested in the material of the book) may find it useful to receive “feedback” from readers, answer their questions, and give recommendations.

Articles in scientific or popular science journals / electronic resources and courses (**fragmented subjects**). If readers share the author’s views on the subject of research, they will send a request to the author to discover the topic more deeply in a new article or give readers advice. Authors understand that periodicals are becoming more successful with loyal readers. Therefore, if the author understands the expectations of readers - this will be the key to the success of his publications.

Materials and recommendations for the development of professional skills and techniques, which include event diaries and expert opinions (**intricate subjects**). People need to understand the principles and train their skills and here they have a desire to find out if everything is done correctly. Experts with good practical experience and a desire to apply it will be able to study the actions of people and explain what they are doing wrong.

Fiction (**chaotic items**). Readers may like the work of the author, they want to know his creative plans or share their ideas - this is a good emotion. The authors want to cherish the opinions of readers and their emotions. To do this, they are ready to "reduce the distance" with an interested audience.

4.2 Positioning the SuperBook Digital Platform

The existing platforms for working with electronic literature on the Russian market do not make a unique offer in the field of communication between authors and readers and do not always satisfy the users desires who want to understand the material in more detail, but they are not able to discuss issues with the author directly, give feedback, leave responses and recommendations for further scientific or journalistic work. Even the most popular platforms do not have a built-in function of online communication with the user in the context of the studied electronic literature. The needs of users of the educational process are not taken into account quite enough; the process of interacting with the platform is difficult and does not contribute to the continued use of published materials.

¹ The classification of subjects types is based on the model Cynefin Framework

In order to determine the approach to the development of the SuperBook digital platform, you need to understand what the audience need and what they lack right now and what the true interests of consumers and producers are.

Consumers include students and people continuing academic activities. Customers want access to information sources. However, they lack the ability to communicate with the author of this source of information for a deeper analysis of the topic. In order to achieve their goals, consumers need a certain technological platform that will allow for the exchange of knowledge, experience and ideas, in a simple, convenient and quick manner.

Manufacturers include electronic content platforms, copyright holders of published materials (authors) and experts (people proficient in subject matters). They can be company employees, teachers of advanced universities, experts from various industries and just people who want to share their professional views through articles, publications, research, various kinds of literature, as well as through consultations in the context of any literature on their subject.

Among the motives of the manufacturers there are the following: the desire to get objective criticism, fresh ideas, the wish to see another approach to studying the problem, make money on consultations. This means that manufacturers also want convenient communications with their competent readers.

The content provider and the consumer are not permanent roles. In the process of interaction, they can change among themselves, depending on whether a person posts his article or asks a question about the work (or book) of another participant of the platform.



Fig 2 – General positioning of the digital platform SuperBook

4.3 Description of the digital platform SuperBook

After identifying your interests, you need to understand what a platform for working with digital literature and other educational content should be, how participants will interact with it, and how they will interact with each other.

On the one hand, SuperBook is an aggregator of electronic literature, including those available to a limited circle of people (for example, electronic libraries of higher schools, which has already been placed and continues to be placed at various sites open to any visitor. Authors of the book or independent experts, subject teachers of the areas of the book, who are ready to interact remotely with readers.

The platform should join producers and consumers together and allow them to exchange value. For consumers of educational services, this is access to the value created on the platform - courses, training materials, experts, the possibility of collective training and personal contact with the teacher. Both consumers and manufacturers gain access to tools and services that facilitate collaboration.



Fig 3 – SuperBook Digital Platform –External Site Content Aggregator

SuperBook, on the other hand, is a tool that allows participants to publish their own content and organize a constructive discussion. For example, a reader can upload an existing e-book to SuperBook, fill out a classifier for it, find experts to discuss issues on this book “in the margins” of electronic materials, and invite other interested readers to the discussion. If a platform participant acquires “intricate” knowledge, which should be manifested in the form of fixed professional skills (for example, sports training to achieve certain goals), he can create his own blog (training diary) and invite relevant experts to receive consultations in the context of his digital diary.



Fig 4 – The SuperBook Digital Platform–The Aggregator of Participants’ Own Content

As a part of this study, the authors offer a description of a digital platform aimed at additional communication between authors and readers. This is an easy, simple and understandable solution for an interested person who wants to understand quickly any material, situated in front of his eyes right now and who is ready to contact the authors of the material (as the most obvious experts in this situation), or to other subject experts, in one click.

According to the authors views, a platform with services like this has a lot of potential and low competition in the market for several reasons: 1) Almost all periodicals are presented in an electronic form 2) Periodicals depend significantly on the loyalty of readers 3) Web resources are widely used to promote electronic products.

The proposed platform can be easily integrated with existing electronic press sites, whose audience is very large, as well as with all LMS educational institutions. Through the use of microservice architecture and marketplace tools, platform services can be integrated into other industry platforms - for example, the training diary service mentioned above with the advice of trainers and doctors can be integrated into a digital platform for sports movement, which is developing with the support of the Ministry of Sports of the Russian Federation.

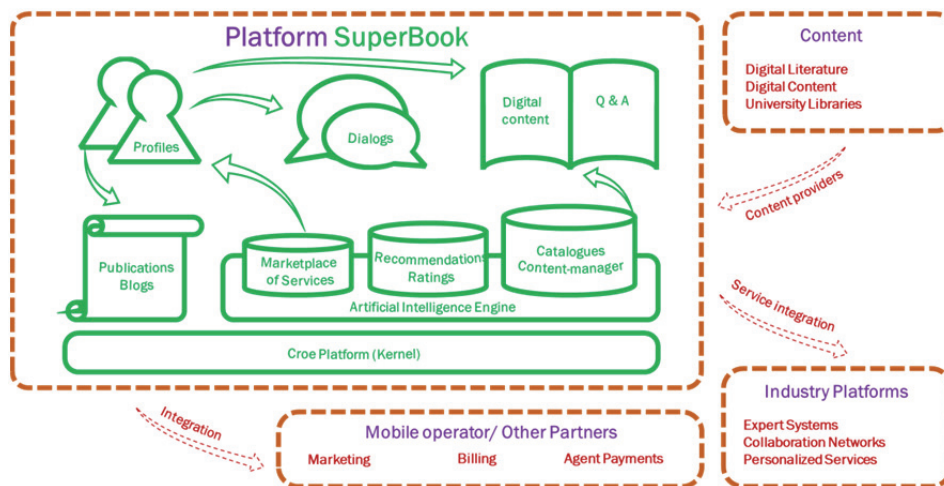


Fig 5 – The Top-level architecture of the SuperBook digital platform

The requirements for the functionality of the SuperBook platform are based on the needs identified in the study.

1. Ecosystem and SuperBook Values

Unlike e-press platforms and sites, in the case of the SuperBook service, the main focus is made not on the content, but on the product, service and community around it. Services should be understood as applied tools for communicating with authors and readers, webinars, broadcasts, consultations between authors and experts, chats with readers.

The ecosystem creates values for all key participants in the process:

1. Readers get value from communicating with authors and experts.
2. External platforms (content providers) receive value due to the increased interest of readers and additional income from the platform.
3. Authors and experts get value from new ideas from readers, a better understanding of the audience, additional income from consultations.

A key opportunity of the platform is the exchange of ideas and opinions, help in understanding the material. Users should have access to recommended and popular content. In accordance with the user's profile (analysis of the profile on social networks, personal account in LMS and training courses is also possible), the user can access the recommendations section - providing the most relevant selections depending on his interests. Content categorization can also be implemented at the expense of other users who tag by profession / industry / function for easier navigation. In the advanced version, artificial intelligence should be used for categorization. The content filtering will allow you to search for the necessary courses depending on the current preferences and tasks of the user.

2. Work with users

Users of the SuperBook digital platform include all readers of any electronic platforms that host e-books, the press, any literary sources and electronic courses. Users have standard access to books and magazines in the storefront, or get this access in the storefront of the SuperBook platform, which hosts links to partner content. Next to some books / articles (the authors of which agreed to become "Super Authors", or the site, having the appropriate rights to the content, decided to provide the book to the SuperBook platform to form collaboration services around it), the SuperBook icon is available to users. When choosing a SuperBook on an external site, it switches to the SuperBook platform. Users are able to register in the one-click platform quickly. After registration, users acquire an e-book / journal with the necessary period for communication with authors / experts, after which you can start communication with authors / experts of this book or article. When a book / magazine / e-course / own content is opened in SuperBook, users see an icon for dialogs with authors / experts, as well as the responses of the authors / experts to questions "In the margins" of electronic material. The main functions that are available to users:

- Reading of the books / articles, viewing electronic courses, communicating with authors and experts in the context of the material being studied
- Opportunity to add comments to blog posts and answers to content questions
- Opportunity to invite like-minded people - other readers interested in joint study of the material
- Opportunity to create or upload your content to organize its discussion with experts or like-minded people
- Reading of the author blogs and open discussions

The functionality of the SuperBook platform provides readers and authors with additional services - a rating of ideas for new books, a readers' wishes board, etc.

It should be noted separately that, in addition to the choice of the content for study, the user can download the existing e-book (textbook) to the SuperBook platform and contact experts on the subject of this book to consult him on the material of the book. Readers of the same book can find each other in order to receive expert advice on the book under study together. In addition, the user, if necessary, can create and maintain a blog (diary) of events related to obtaining the necessary skills, and request advice from subject experts in the context of the described events and their goals.

3. *SuperBook Partners*

In addition to the main partners - existing content sites, it is worth noting the important role of the technical partner (developer / owner) and the mobile operator, that provides quick access of users to the platform and helps to attract the largest number of subscribers to the platform, including:

- Carries out the marketing promotion of the SuperBook platform;
- Forms services, including accepting payments, making agent settlements with sites, authors / experts, and other partners.

The technical components have already been created for the SuperBook platform:

- Profiles of book authors and independent experts / educators,
- allowing you to enter information about yourself, maintain a blog, associate yourself with books available on the platform, and accept requests for advice.
- Reader profiles, allowing the reader to identify areas of their knowledge needs, find the necessary books, authors and experts, subscribe to consultations and complete subscriptions.
- Profiles of sites and universities to manage the list of e-books and terms of access to them, activate and deactivate subscription services for reading electronic books.
- Online dialogs allowing readers to communicate with representatives of sites and universities, as well as consult with book authors and experts through the exchange of text, graphic and voice messages.
- Providing services, including:
 - Means of integration with mobile operator's platforms for accounting for subscriptions to services, payment control and reporting
 - Recommended subsystem using artificial intelligence, allowing readers to offer electronic content, authors and experts in accordance with knowledge needs
 - Rating subsystem that allows you to control the "popularity" of books, authors and experts
 - Feedback through a virtual assistant
 - Tools for contextual search of participants

At the design stage, there is a tool for reading electronic literature of various formats with the ability to carry out online dialogs "in the margins" of books, as well as tools for managing electronic content downloaded to the platform.

4.4 Ways to monetize platform services

An important issue for choosing a platform by users is the ability to access services, the terms of connection. Charging fees from all users is rarely used, because it can scare off users. However, the service may charge some participants full cost and provide benefits to those who are sensitive to the price.

The basic financial model of SuperBook assumes that the reader pays for access to electronic content with a subscription to interact with authors / experts for a specified period. If you want to keep the content of books and consultations of authors or experts, the reader pays for the cost of the books, after which access to these books becomes unlimited.

The presented base model is easily transformed - for example, periodical publishing house can offer readers an annual subscription that will be paid by interested readers through SuperBook and provided in the form of access to all issues of electronic journals with the ability to communicate with article authors for a year, after which SuperBook will return the agreed part to the publisher income for electronic content and for the services of authors in conducting online dialogs with readers.

Similarly higher education institutions will be able to pay their students an annual subscription to online interaction with selected teachers as part of e-courses and external authors of educational literature, and then provide students with access codes generated by SuperBook.

4.5 Discussion and further work

Every research has limitations, this one is not an exception. The first limitation is the fact that this study only focuses on one concept development rather than implementation.

Technical components have already been created for the SuperBook platform; a tool for reading electronic literature with the ability to correspond and exchange voice messages "in the margins" and through an online dialogue tool is under construction.

The service of the SuperBook platform for maintaining a blog (diary) of events related to obtaining the necessary skills and providing expert advice in the context of the described events and the goals of the student is in demand as part of a digital platform that supports the development of sports movement in the Russian Federation.

The largest Russian mobile operator, who already has experience of interaction with a technical partner (SuperBook developer) on the other platforms, has showed its interest in the SuperBook platform. The extension of the research on the digital university SuperBook result in a practical implementation of such platform.

5 Conclusion

We understand by “education” not only the educational process, but - if you look from a different angle - gaining different knowledge in the course of studying digital content, the authors set the goal to develop and bring to the market a digital platform for working with electronic educational content SuperBook that can overcome existing barriers of the educational material usage, establish convenient two-way communication between the content author, reader and subject experts, as well as complement existing and developing online education platforms effectively.

To achieve this goal, the authors have analyzed the needs of the audience, current trends in the field of Digital University, the possibility of obtaining finished materials from external sites, as well as the willingness of authors, experts and readers to use the proposed service. The creation of the approach was formed on the basis of the various needs and interests of all market participants. The authors made recommendations on the development of an innovative digital platform SuperBook, distributed through major mobile operators and other channels, with the support of external sites and educational structures, also with the agreement of the authors for enhanced communication with the audience.



Fig 6 – SuperBook Digital Platform Effects

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