

GCPMED 2020
**Global Challenges and Prospects of the Modern Economic
Development**

PROMOTION OF LIBRARY SERVICES IN THE DIGITAL SPACE

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Abstract

Due to changes in technology, especially the invention of the Internet, development of the entertainment industry, etc., the library ceased to be a centre of the scientific life of young people. The article describes the situation in the cultural sphere, shows the role of PR specialists in solving the communication problems that this sphere has, and considers the methods of promotion in the digital economy. Under the circumstances, the main activity of the library is to bring the results of its efforts to the needs of the target audience as close as possible using the formation of a united informational and cultural social space. Digital technologies dictate a new format of work for the modern library, which is determined by well-integrated computer technologies, which in turn increase the competitiveness of the library in the information services market. Modern libraries have information and communication technologies and multimedia that can be used for promotion. Mobile applications, which interact with the consumers before they come to the library, the targeted impact on potential users, the ability of potential readers to learn more about the library's work thanks to new technologies and other methods help to increase loyalty to this institution among young people. The article analyzes the possibilities of using the main public relations tools in the new digital reality, which can be efficiently used to promote the library. Proposed methods for improving PR-tools. Considered popular methods for solving the problem are: online and offline algorithms.

2357-1330 © 2021 Published by European Publisher.

Keywords: Library, online algorithms, offline algorithms, PR, promotion



1. Introduction

Modern reality significantly transforms library identity. It is clearly shown at the level of understanding the social purpose of library institutions, in particular, of their multifunctionality. As a result, libraries lose the traditional understanding of their purpose, which is now subject to awareness either as a degradation stage, or a natural transformation into a new quality associated with the acquisition of new social meanings (Sokolskaya & Russak, 2015).

In the classical sense, a library is an institution that organizes the acquisition, storage, and public use of work of literature and performs informational, educational, research, methodological, and publishing functions. Therefore, we can conclude that even modern conditions defined by digital reality do not change the purpose of libraries, offering only new technologies for collecting, storing and using works of written culture, but the implementation of the information and educational, research, methodological and publishing functions is problematic, because the organization of active interaction with the consumer of library services is often not achieved. The youth audience is especially problematic, due to a number of reasons. Firstly, there is high competition for consumer attention: shopping and entertainment centers and enterprises are becoming the main competitors in the leisure market of the population, which is the main problem in promoting cultural and leisure institutions among young people. The spread of electronic means of mass communication and widespread computerization led to the process of stopping reading books. Secondly, printed information is particularly irrelevant for young people: with the advent of the Internet, libraries need to create a unique offer for their target audience (Vasilyeva, 2015), the need for memory institutions has fallen sharply, but a new platform for creativity has appeared, which allows using the latest technologies to implement the functions of cultural and leisure institutions. Thirdly, incorrect positioning: the public library in the era of digitalization is the top of the information and communication pyramid. Thus, the usual idea of the library does not correspond to reality.

Today, the library space is also a virtual library space. Librarians create their own communities and interest groups in an electronic environment, discuss current topics, and exchange work experience. The library's Web site significantly increases its status. The library's website is its image in the information space, as well as the main tool for informing the population (Kurganskaya & Kubaev, 2017). Library blogs serve as a tool for promoting the institution's news, sharing experience in promoting books and reading, informing about upcoming events, new additions to the library fund, and attracting a new audience.

2. Problem Statement

At the moment, the main problem is that the situation described above is perceived incorrectly by many library managers and their employees. There is no analysis of the target audience: its interests, needs, desires, preferred communication channels and forms of providing information. Due to the lack of a communication strategy that would be aimed at different segments of the target audience, namely, young people, employees of the library's PR-departments are often unable to solve the communication problems that arise. Refusal to take into account PR-tools that are effective for this social group, as well as to use relevant channels for transmitting information and features of creating interesting and effective content on the interesting topics. Most public relations experts working in libraries limit themselves to a narrow range

of PR tools such as sending press releases and post-releases to several regional mass-media, organizing events without a clearly defined target audience, and using the institution's website. They measure the effectiveness of their PR-campaigns only by quantitative indicators. The problem to be solved in the course of the article is a description of methods, tools and approaches to establishing communication between the library and a young audience on the example of Samara Regional Universal Scientific Library.

Special attention should be paid to the analysis of the possibility of using online advertising. Currently, the effectiveness of this type of advertising is due to the keyword model, which correlates users search queries with ads. This study was aimed at studying popular online advertising algorithms and identifying their applicability to the problem under study. Of interest is the use of collaborative filtering: search for users with identical behavior.

3. Research Questions

It is necessary to determine which PR-tools and communication channels are effective in working with young people. It is also necessary to justify which PR tools should be used by the library's PR-Department in order to solve the communication problems that have arisen with a young audience. Particular attention should be paid to improving the effectiveness of the tools that are already used by the library. It is important to pay attention to modern methodologies and algorithms: in particular, to determine the possibilities of advertising on the Internet, to evaluate online algorithms. The problem of matching is considered, including a greedy algorithm for finding the maximum match, and the coefficient of its competitiveness is estimated. The problem of keywords in the context of search advertising, the Balance algorithm are of interest. The capabilities and applicability of the Adwords algorithm are evaluated.

4. Purpose of the Study

The authors developed the unique solving of communication problem, which arose at Samara Regional Universal Scientific Library, causing reduction in attendance by young people. The methods to improve every PR-tool were advised, which are used by this cultural institution, to attract the attention of young people to its activities. The steps of development of this cultural institution were formulated. They are necessary for the development of this cultural institution, because of the changes that occurred in the technological sphere, the library stopped being center of youth's science-life. The domestic and foreign experience of this problem were analyzed: considered interesting the research on the applicability of new technologies in library activities (Gushul & Teslya, 2018), functioning of libraries in crisis environment (Sebastian et al., 2018). Also of interest is research about optimal functioning of libraries (Stankovic, 2016). The models suitable for solving the situation were considered: greedy algorithm for finding the maximum match, Balance algorithm, Adwords. Recommendations on the applicability of these algorithms in modern conditions of library functioning are given.

5. Research Methods

During the research well-known method for developing a PR strategy of a cultural institution was used. The research was based on PR-activities of the Samara Regional Universal Scientific Library. For the

analysis, PR-materials of the Samara Regional Universal Scientific Library for 2019 were collected. The subsequent analysis of activities conducted by the library, its identity, website, activity in social networks ("Facebook", "Twitter", "Instagram" and "Facebook") and publicity capital to evaluate media relations took 16 hours. We also analyzed the market, competitors' activities, and the interests of the target audience in order to come up with reliable hypotheses. Data collection and analysis took about 7 days.

Based on the information obtained, the applicability of a number of algorithms was investigated. First, it is obvious that an online greedy algorithm can be used to solve the problem, which is based on decision-making: in response to each input element, it maximizes the function from that element, taking into account the past. But in the end, it does not provide such a high-quality solution as the offline algorithm. The question of the applicability of the matching problem in this context was considered. This problem allows us to match ads to search queries: it corresponds to the problem of a bipartite graph, where two sets of vertices and sets of edges connecting these vertices are considered. We need to find the maximum match. It is proved that the coefficient of competitiveness of this algorithm is 0.5, that is, the number of nodes for which it finds pairs (compared with the offline algorithm) differs by no more than 2 times. Second, the applicability of the keyword problem is considered. Only online algorithms are suitable for solving this problem. In this study, it is applied in a simplified form: for each request – one ad, the clickability coefficients are equal, and the value of all ads is the same Third, the Balance algorithms are considered (improvement of the simple greedy algorithm), Adwords.

6. Findings

As a result of the research, the following PR tools were identified that should be effective for promoting the activities of a cultural institution:

- media relations;
- corporate identity;
- Internet;
- special event.

When analyzing the use of these tools by Samara Regional Universal Scientific Library certain problems were identified, which will be listed later, and then ways to solve these communication problems were found and described to increase the library's attendance by young people.

The main target audience was identified – young people and divided into four segments:

- pupils;
- students;
- adult youth;
- young atheart;

The main competitors of the Samara Regional Universal Scientific Library were analyzed: the Samara Regional Youth Library, the Samara Theater of Young Spectators "Samart", the gallery "Victoria", the Samara Regional Museum Of Local History named after Alabin, the Museum of Art Nouveau. Their target audience was analyzed, their unique selling proposition (USP), their promotion tools, interaction with the audience, and the frequency of activities were highlighted.

When analyzing such a PR-tool as media relations, the following problems were found:

the media used are not aimed at a young target audience, so they are not effective in promoting the institution among young people,

- close cooperation with only three media outlets, hence no new traffic to the library.

Analyzing special events, the following problems were identified:

- lack of general topics in the events held,
- a small number of activities aimed at a specific target group,
- the topics of events do not correspond to the interests of modern youth.

Analyzing the institution's activities on the Internet, the following problems were identified:

- too many sections on the website: some of them are empty, while others repeat information,
- low usability,
- there is a lack of unified visual concept in social networks and outdated design solutions are used,
- there is no systematic publication of content in social networks,
- no interaction with the audience,
- do not use modern features in terms of online advertising.

Let's look at its features for a modern library. Today, there are many methods that allow you to convey information to the potential consumer. You can use special advertising platforms-sites that allow you to place third-party ads under certain conditions. Often, the advertiser pays for the number of impressions - the appearance of the ad when the user loads the page.

It is also possible to place ads together with search results. In this case, payment is made only for the user's click on the ad. In the case of direct placement of library ads, you need to take into account a number of features: you need to determine which ad parameters that are stored in the database should be set. As a rule, only clearly defined terms are allowed to be used. This problem occurs when you need to rank similar ads: as a rule, each library can provide similar content. In this case, the most recent ad may be displayed first. In particular, proximity-based hashing can be used: in the case of a General approach, objects are hashed several times, so that similar objects are more likely to fall into the same cell than dissimilar ones. And only pairs that fall into the same cell are checked for similarity. For this situation, it is difficult to use this approach due to the strong similarity of the content.

Another way is to evaluate the attractiveness of an ad: the more clicks on an ad, the more popular it is. But even here there are difficulties:

- the most clickable ad located at the beginning or close to the top of the list,
- the attractiveness of the ad depends on the search terms,
- all ads can be displayed until the click probability is estimated: if this probability is initially zero, then the impression will never take place.

Therefore, we can draw an analogy with printed publications: if you advertise a library in a specialized magazine dedicated to librarianship, it will probably work, but since the circulation of such publications in the total volume of printed products is insignificant, then advertising will cost more. The same is true on the Internet: on a specialized library resource, the cost of an ad will be more expensive.

But the Internet has a special advantage: you can use information about the user to assess how attractive the ad will be for them, or, in the case of promoting the library, how important it is to convey this ad to a certain circle of people. You can assess whether a person is a member of the club of fans of reading

detective stories, young prose writers, maybe he often uses a certain combination of words in search queries or email messages, there are bookmarks made by him on the corresponding sites. Of course, the use of these approaches in some way conflicts with the need to protect information, so it is important to maintain a balance and not forget about the relevant legislation. In our study, mainly online algorithms based on the idea of "greed" were considered. They assume that a response is generated after each element of the stream arrives, and they must make decisions without knowing about the future. In our case, it would be easy to use offline mode: study the history of search queries over the past period, see how library users are trading for search terms, and compare ads to queries in order to get the maximum profit. But this is fraught with too much time, in addition, the activities of libraries are still less a business, more a service to society, and it is not entirely appropriate to talk about profit here. Therefore, it is rational to use online algorithms that immediately match the ad to the search query. The matching problem and the keyword problem were solved using the appropriate algorithms. These methods are very well suited for solving the problem, but due to some difficulties, they were used in a simplified form: in the future, it is planned to study the problem taking into account more specific probability slices and various criteria.

In addition, there are additional recommendations for reviving interest in the library, in particular, when analyzing the corporate identity, it was found that it is missing, since its constants (colorographic elements: trademark, logo, corporate block, colors, fonts, layout system, company names and slogan), which should be present unchanged on all elements of the corporate identity, are not developed, or do not have unity in the design (Korablev et al., 2020; Pogorelova et al., 2020). As part of the improvement of the effectiveness of media relations, it is proposed to use popular news accounts of the social network "Instagram", public communities in "Vkontakte", personal blogs of Samara inhabitants and well-known Internet news portals among young people. Popular models and tasks for optimizing advertising on the Internet are considered. Its effectiveness is due to the Adwords model, which matches queries with ads. Online and offline algorithms are considered to increase attendance at special events, we recommend holding lectures on topics relevant to young people, organizing courses on financial literacy and entrepreneurship, courses on developing public speaking and self-presentation skills, as well as a master class on using computer programs.

As part of working with social networks, we need to add more engaging, interactive and user-generated content, add the "About books" category, follow the same visual style of publications, and launch a newsletter in one of the messengers. All printing should be done using the library's corporate identity, and special attention should be paid to the library card. The website should have the following sections: "Events", "Media about the library", "Photo album", "Our mission" and "Poster".

7. Conclusion

Methods for increasing the PR-tools effectiveness that can be used:

- using more Internet portals that are popular among young people, as well as attracting personal blogs to communicate with the public;
- holding lectures on relevant topics for young people and courses on the development of «flexible skills»;

- creating a single visual series in social networks of Samara Regional Universal Scientific Library and adding some interactive content in it;

- modification of the web site;

- creating a brand-book and applying the identity in the course of the library's activities.

There is no data on library visitors and the number of visitors to events during 2019, because the Samara regional universal scientific library does not keep records of this. Further research may lead to strengthening the brand of the Samara Regional Universal Scientific Library by searching for tools that can transform this place to a center of young people's cultural life and put it in a row with other cultural and entertainment centers of the Samara. The study of this problem helps to solve the difficulties of modern libraries that arise communicating with young people, and to convey the library's proposals to their potential consumers and become a place of self-development and leisure for them, in order to prevent the disappearance of cultural institutions of this format.

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