Web Analytics, Legal Framework and Estimation of Profitability of the Theater Website

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Abstract

In this article it was examined the web analytics of the Maria Zankovetska National Academic Ukrainian Drama Theatre website and proposed the methods of the profitability's assessing of the theatre's website. Due to the crisis which is caused by the COVID-19 pandemic, the negative tendency of the decreasing the number of sessions, page views and average session duration on the theatre's website was investigated. The methods of the profitability's assessing of the theater's website were worked out. The role of the website in communication between the theatre and the audience is also considered. Its informative, educational and cognitive, commercial and communicative functions of the website of the Maria Zankovetska National Academic Ukrainian Drama Theatre is being analyzed and the tendencies of the users' interest in this information resource are being traced in 2018-2020. The functionality of the website of the Maria Zankovetska National Academic Ukrainian Drama Theatre was analyzed. It was proposed to improve the functionality of the theatre's website by adding a feedback form and a calendar of events. By means of these options, the viewers and fans can quickly find an event or show on the certain dates, write their reaction to the play that they had seen before, ask questions to their favorite actor, offer ideas to improve the service, to expand the repertoire, to upload their photos from the performances and so on. The algorithms of the action and the models of the adding of the feedback form and calendar of the events were developed to the information resource of the website. The geo-statistics of the visiting the website by the users, their activity statistics, and web page browsing statistics of the website operation were being analyzed for the last 3 years. The method of the profitability's assessing of the theatre's website was worked out. In the statistics of the Maria Zankovetska National Theater website it was mentioned that new and regular customers have been visiting it from 2018 to 2020, which shows a tendency to slightly increase how to attract the new customers to the site in the COVID-19 crisis.

Keywords 1

Communication, theater, actor, user, website profitability, auditorium, web analytics, estimation, theater website.

1. Introduction

The development of the latest information technologies and the Internet has influenced on the theatre life [1-5]. More and more viewers aren't getting the information from the playbills, posters or programs, they are getting them from the theatre website [6-10]. The purpose of the article is to analyze its role as a primary source in communication between the audience and the actor, to explore the web analytics of

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the website of the Maria Zankovetska National Academic Ukrainian Drama Theatre and offer the methods of the profitability's assessing of the theatre's website.

The scholars didn't ignore the issues of the theatre communication. The theatre art is connected with its spectator by its nature, without whom this mystical action does not take place completely. Theatre critic Yu. Barboy [11] notices that the links between theatre and society aren't appreciated. It is possible that the logic of social processes can be observed in how some theatre structures come into force and others are temporarily forgotten, in what changes take place within the structural formations themselves.

Some Ukrainian theatre critics such as V. Panasyuk, T. Stashenko [12] simply interpret theatrical communication as "broadcasting a stage text to the public." A. Lipkivska [12] considers it as a process in which both actors (or production group) and spectators take part on a parity principle and offers the recipes to overcome the barriers in this area.

We will try to consider the role of the theatre website as a part of the communication in a more applied application, namely as the most accessible and complete source that can satisfy a potential viewer. The site of the Maria Zankovetska National Academic Ukrainian Drama Theatre [13], which was established in October 2007 and has survived two editions since that time, is considered as an example. The theatre's website performs several functions, exactly the informative, educational, commercial and communicative functions. We will consider each of them in more detail.

The mainly part of the materials of the Maria Zankovetska National Academic Ukrainian Drama Theatre website has an informative character. Four of the seven rubrics ("Announcement", "Playbill", "Repertoire", "News") are designed to convey the latest news of the theatre life to the people who are interested in them. A successful pre-premiere announcement, the interviews with the directors and actors, the photos from rehearsals, press releases and promotional videos of the upcoming play become an integral part of the success of the theatre production. That's why the announcements are placed on the main page of the website to attract the attention of the users immediately.

The "Playbill" section will help the potential spectators to plan a visit to the theatre, decide on the play, find out the duration and time of its show and the names of the main actors and directors. You can learn more about each of the performances that play on large and chamber stages in the "Repertoire" section. There is a list of actors, a brief annotation of the directors and a summary of the plot here. The subheading "Written-off performances" is a special nostalgic place, where you can reuse the performances that aren't used in the current repertoire, but had their own audience.

For users who want to have more information's about the life of the theatre troupe, the "News" section will be indispensable, which is divided into four sub-sections: "Announcements", "Events", "Press", "Tours". At the beginning, the short notes were the main content of the "Announcements" subheading, which were submitted by the literary part of the theatre on the eve of the premiere. Since November 2015, the weekly video announcements of performances or video announcements of special theater projects such as Zankivchanska evenings, the charity concerts, etc. have been published.

The interested people can find the results of the contents for the vacant positions, decrees of the President of Ukraine and government decrees, which are concerned to the theatre activities, and the information about the tour in the subsection "Events". The news about the awarding of actors with honorary titles and awards is gaining a particularly large number of views. However, this subheading sometimes duplicates the information from other subheadings (especially often from "Announcements"), which it would like to be avoid to improve the website navigation.

The theatre life has always been in the sphere of interest of the press. The actors and directors of the play have been looking forward to waiting for the post-premiere reviews, especially those which were written by the theatre critics. If before such reviews were published exclusively on the pages of newspapers or magazines, then the advent of the Internet has significantly expanded the range of such reviews. The literary part of the theatre scrupulously has been monitoring the reaction of both professional critics and spectators. Part of this material is being published in the subsection "Press".

This subheading not only introduces the opportunity into the communication with the audience to find out the opinions of the leaders of the literary critics, but often becomes an occasion for heated discussions on the pages of social networks. Especially popular are the interviews with the actors and directors of the theatre, from which the audience finds out the interesting and sometimes unexpected facts from the lives of their idols.

The subsection "Tour" is primarily intended for the non-resident fans of the Maria Zankotsetska National Theatre. This is an information field of the press service and its announcements in the

subsection help the administration to prepare the out visiting performances both on the theatre stages of the large Ukrainian cities as also on the stages of the settlements and towns. Here you can find the information about the troupe's participation in regional and international projects ("Transmission" (Poland, Slovakia), "Golden Applause of Bukovina" (Chernivtsi), "Ternopil Theater Evenings" (Ternopil), trips to the East and others.)

If it is necessary to clarify the urgent issues, the user can refer to the subsection "Contact Information" (section "About the theatre"), which provides the contact information of the administrative staff, the press service and the ticket offices. In the same section you can find out about the available vacancies in the theatre.

So, having considered the rubrics that serve for the information function of the theatre website, we can state that the interested user can learn a variety of the information about the performances and the life of the troupe from them.

No less important is the educational function, which is dedicated to two sections on the site: "Zankivchany" and "About the theatre." The section "Zankivchany", which is intended for a deeper acquaintance of the audience with the members of the cast, is divided into five subsections: "Creative composition", "Administration", "Orchestra", "Workshops" and "Coryphaeus".

The concept of the subheading "Creative composition" seems to be extremely well thought out. Not only the basic biographical data of the actors and leaders of the creative part are given here, but also each essay is a kind of a port-folio of the actor with a list of roles, which he or she had played, with the most interesting photos from the performances and the filmography. In our opinion, the next step in improving the subheading is the addition of the video clips in which the actors demonstrate their roles in the best way. Such applications would be useful not only for the ordinary viewers who are interested in a specific actor, but also for representatives of the film companies and production agencies who are looking for the necessary types for the cooperation, and thus they would increase the competitiveness of the Zankivchanka in the theatre market.

In the subsection "Administration" users will be able to get acquainted with the brief biographical data of the people, from the general director-artistic director to the heads of services, whose painstaking and coordinated work is very important for the functioning of such a difficult organism as a theatre.

A separated section is dedicated to the theatre orchestra. Here you can not only visually get acquainted with the artists of the orchestra, but you can also find out about the information about the CDs, which were recorded by the band, its repertoire versatility, the victories in the international festivals, extraordinary projects etc. It would be worth submitting at least a few of its concert numbers from YouTube or directing the interested user to the orchestra's website www.orchestra.lviv.ua for a more complete acquaintance with the work of the Zankivchanka orchestra in the next edition of the website.

"Shops" is the cognitive and educational subheading. Thanks to it, the theatre's fans will be able to learn about the structure of the cast who work on the edition of the performance, meet people who never go on the stage, but without whose professional work no play would have taken place. However, the shops are represented only by their managers, which somewhat limits the informativeness of this subheading.

In the century-old history of the Maria Zankovetska National Theatre such legendary actors and directors as S. Danchenko, B. Tyagno, O. Hrynko and many others acted in its cast, on whose creative achievements the new generations of actors and spectators should be educated. Therefore, the subheading "Coryphaeus" is justified and necessary, which should tell about these "pillars" of the theatre, but unfortunately at the moment it is not developed.

Another component of the educational and cognitive function of the website is the section "About the theatre", which consists of eleven subsections such as "History of the theatre building", "History of the theatre cast", "Virtual tour", "Contact information", "Vacancies", "Partners", "Information on the activities ", "Public procurement ", Technical characteristics", "Lease agreements" and "Archive".

Extremely fascinating is the history of the theatre building, which had been the largest theatre in Europe for many decades (it was about 96 metres long, 76 metres wide and more than 7,000 square meters). In the subsection "History of the theatre building", users will learn about the theatre's founder, the Count Stanislaw Skarbek, the project authors as Ludwig Pihl and Johann Salzman, the structure of the building, its reconstruction in 1943 and much more information.

No less interesting is the subheading "History of the theatre cast", which divides the development of the troupe into five periods such as "Birth of the theatre 1917-1921", "Theatre in travel 1922-1930", "Zaporozhya period. Military disaster 1931-1944", "Lviv period. 1944-1990", "Theatre in an independent Ukraine 1990-2020", with a detailed analysis of the creative work of the troupe at each stage. The photos from the performances, which allow not only to get acquainted with the legendary actors, but also to comprehend the stylistics of the scenography of performances of different years are invaluable.

By visiting the Maria Zankovetska National Theatre online you can visit the subsection "Virtual Tour", which offers not only the photos of the central entrance of the theatre hall, but also a virtual 3D-tour, which will help you to watch the details of the interior of the different parts of the building more exactly.

Since January 2017, they have begun to sale the tickets online via the theatre website, that is, the site has begun to perform a commercial function. Each user by entering the section "Poster" and choosing the performance that he or she wants to watch will be able to use the function "Buy the tickets". On the expanded scheme of an auditorium including stalls, balconies and boxes price by clicking the cursor you can find a row and a place's number and a ticket. Analyzing the accounting data, we can say that such a service is systematically gaining popularity. In 2017, 9061 tickets, then in 2018, 20,924 tickets, in 2019, 25,528 tickets were sold online. If this tendency continues, in a few years there won't be any need to use the theatre box and the spectator organization offices.

The heading "About the theatre" is one more area of the focusing on the commercial information. The subheading "Technical characteristics" will be useful to those who plan to perform on the Maria Zankovetska National Theatre stage. There is a detailed information about the available parameters of the stage, concert light and sound effects here. It will help the tenants to plan their performance in advance and properly prepare the required documentation (see the subsections such as "Lease Agreements" and "Rules and Instructions").

Adhering to the open economic activity's policy the theatre administration systematically publishes quarterly and annual results of their economic work on their website (see, subheading "Information on activities" and the annual procurement plans (see subheading "Public procurement").

By taking into account the above information, we can confirm about the growing role of the commercial function of the theatre website. At the same time completely ignored by the authors of the site of the Maria Zankovetska National Theatre it has got its communicative function. Considering the theatre communication as an exchange of the information between the troupe and the audience, we emphasize its dialogical nature. In the face of ever-increasing competition in the art market, the theatre should make every effort to improve the communication with all stakeholders such as the sponsors, the advertisers and the spectators above all.

The use of the latest methods [14-17] and web technologies [18-20] is important for the process of the theatre informatization. Therefore, it is urgent to create a feedback site on the theatre website, where spectators and fans can write their feedback from the play, ask questions to their favorite actor, offer ideas to improve the service, expand the repertoire, upload their photos from the performances etc.

To create a feedback form, an algorithm of the actions has been developed which includes the following steps (Fig. 2):

- adding the certain fields to the form;
- indication of the names and types of the field such as the text, date, site, chetbox, etc.;
- indication of the place of receipt of the completed form as the e-mail;
- publishing the form on the page and checking its work;
- after filling out and sending the form, check the availability of the answer by e-mail. in its absence, correct deficiencies and double-check the operation of the form;
- save the final form settings after their checking.

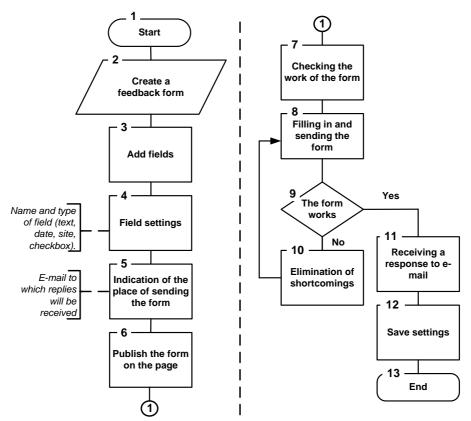


Figure 1: Flowchart of the algorithm for creating a feedback form

To post the announcements about the future theatre performances you need to configure the Calendar plug-in. To realize this task, you need to do a sequence of the algorithmic actions to create an event in the calendar on the information resource in accord with the model, which is shown in Figure 2.

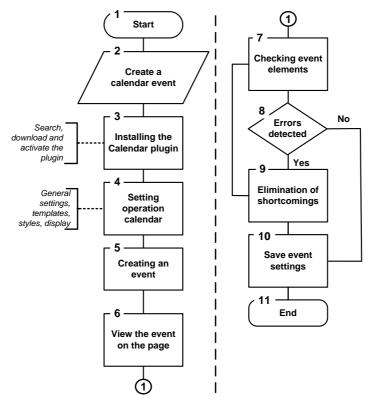


Figure 2: Block diagram of the algorithm of actions to create an event in the calendar

To create an event in the calendar, you need to do a series of steps:

- search, download and activate the Calendar plug-in for the platform;
- set the general parameters, template, style and calendar display;
- create an event in the calendar and view it on the page;
- check the details of the event's operation such as the links, text, photos, map, places, organizers);
- detect and eliminate the disadvantages in the event;
- re-check the event;
- save the changes to settings.

The online actors and directors' meetings with the audience is an interesting practice. That is, it is about creating a virtual fan club of the Zankivchanka's residents that will be an important source of the information about current public opinion that can be taken into account to plan the strategic development of the staff.

2. The Profitability Estimation of the Theatre Website

By calculating the profitability (R) of the website, the structure of the Maria Zankovetska National Theatre website uses the following data:

- 1. This is the average number of the contacts that had occurred after the visiting the website by target visitors. By contact are meant a phone call, an e-mail or regular mail, a message via messenger, a visit to the theater box office, buying the tickets online and ordering other services. Target website visitors are visitors who have independently found the website by keywords and phrases, by relevant products and services which were presented on the website.
- 2. The number of purchases through the website service.
- 3. The average profit from one purchase.
- 4. The cost of creating and maintaining the website.

Profitability of the Maria Zankovetska National Theatre website is calculated by the following formula for a certain period:

$$R = PxQ / S, (1)$$

where R is the profitability of the website; P is the average profit from one purchase for a certain period; Q is the number of purchases which is made over a period of time; S is the sum of all costs for the creating and maintaining the website for a certain period.

When calculating the profitability of the site you should be guided by empirical data:

- In average the main page of the site which was created by the Maria Zankovetska National Theatre website brings at least one target visitor per working day. Target visitors are only those visitors who have found the site on their own with the help of the keywords.
- For different kinds of the activities, this index is averaged and depends on the popularity of the website.
- If the office and its website are located in a large city and if this website includes the competitive prices for goods and services, the number of contacts that took place equals to 10-15% of the number of the website visitors.
- The number of purchases, that can be made after the contact which had occurred, equals to 40%-50%.
- The amount of textual content which is posted on the website and describes the offered goods and services is approximately equaled to the volume of the text of the competing websites that can be found in the first 40-50 positions on the demand keywords in the search engines.

It is difficult to calculate the profitability of the website for many reasons. The profitability of the website is affected by a variety of factors, many of which are changing rapidly with the passage of time. It includes:

1. Geographical location of the company / institution.

The highest profitability modulus of the website is typical for large cities. The smaller is the settlement, generally the smaller is the website and the profitability modulus. We are talking about the comparison of the websites which are identical on the volume, the date of the creation, the professional and technical level of performance, one subject, etc.

2. Competitiveness of the goods and services at a given time.

It is necessary to consider the seasonality of the sales, the degree of market saturation of a specific product and the demand level for it in a specific place in the certain period of time, the ratio of "price / quality" is compared to similar products and services and presented on the competing websites.

3. The number of Internet users in a specific settlement and region and many other parameters.

3. Results

Analyzing the audience review that is presented by the theatre administration we can say that the interest in the website corresponds to the theatre season periods. The highest attendance is observed during the so-called "high season" from October to March that gets gradually faded in the summer and begins to recover in September. Moreover, despite the total number of site visitors with the number of 178, 004 people in 2018 and 172, 771people in 2019 the parity between new visitors and those who return again remains in percentage between 26% and 74%).

Table 1Geo-statistics of website visits by users for the period from 1 Jan., 2018 to 31 Dec., 2018

	9	Sources of traffic	Proceeding		
Country	Users	New users	Shows	Failure rate	Pages per show
178 004 %	167 296 %	367 836 %	36,83% medium/	4,73 medium	178 004 %
from general quantity 100,00% (178, 004)	from general quantity	from general quantity	run-through	/run- through	from general quantity
	100,19% (166, 985)	100,00% (367, 836)	36,83% (0,00%)	4,73	100,00% (178, 004)
	(200, 200)			(0,00%)	
1. Ukraine	169 400 (94,43%)	158 685 (94,85%)	353 610 (96,13%)	36,46%	4,76
2. United States	1 709 (0,95%)	1 583 (0,95%)	2 236 (0,61%)	58,77%	3,16
3. Poland	1 467 (0,82%)	1 311 (0,78%)	2 408 (0,65%)	34,09%	4,66
4. Germany	1 463 (0,82%)	1 055 (0,63%)	2 042 (0,56%)	43,54%	3,80
5. Russia	646 (0,36%)	617 (0,37%)	803 (0,22%)	49,07%	3,81

		Sources of traffic	Proceeding		
Country	Users	New users	Shows	Failure rate	Pages per show
6. United Kingdom	559 (0,31%)	426 (0,25%)	748 (0,20%)	44,65%	3,71
7. Netherlands	519 (0,29%)	342 (0,20%)	716 (0,19%)	44,55%	4,06
8. France	407 (0,23%)	382 (0,23%)	478 (0,13%)	67,15%	2,09
9. (not set)	400 (0,22%)	323 (0,19%)	531 (0,14%)	39,92%	4,65
10. Italy	311 (0,17%)	285 (0,17%)	419 (0,11%)	45,11%	3,37

Analyzing the comparative data for 2018 and 2019, we can observe a slight decline in the interest in the www.zankovetska.com.ua website.

The number of shows, page views and the average duration of the show has decreased slightly.

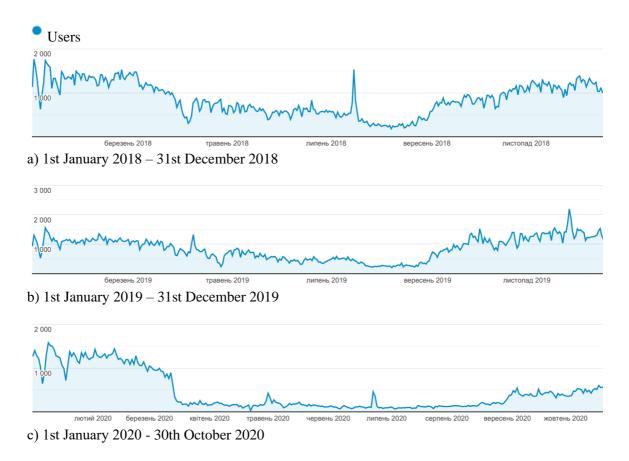


Figure 3: Statistics of user activity for the period from 1st January, 2018 to 31st October, 2020

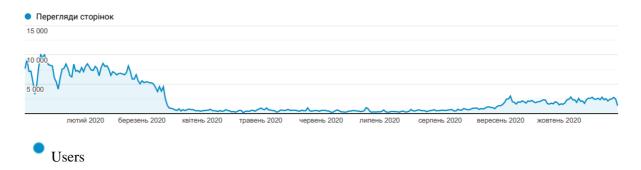


Figure 4: Statistics of user activity for the period from 1st January, 2020 to 31st October, 2020

In 2020, due to a quarantine break in the theatre, we can predict a further reduction of the users on the website. At least, such bases have been given by the data for 10 months of the year 2020.

At the same time, there is a positive increase in the number of the foreign users who visit the theatre's website. According to comparative data, the number of visitors from the United States equals +1.4%, Poland + 1.11%, Canada + 1.73% has increased. In our opinion, it indicates the growth of the international image of the Maria Zankovetska National Theatre.

Statistics of the visiting the Maria Zankovetska National Theatre website by the new and regular customers from 2018 to 2020 are presented in Fig. 5. As you can see, the website has a tendency to attract the new customers.



Figure 5: Statistics of user activity for the period from 1st January, 2020 to 31st October, 2020

Table 2Pages view statistics in the term of 1st January, 2020 – 31st October, 2020

Page	Pagesview	Unique Pagesview	Avr. Time on website	Entrances	Failure rate	% exits
	716,704%	474, 729 %	00:00:56	161,	38,3%	22,50%
	from general quantity	from general quantity	medium/ run- through	251 % from general	medium /run- through	medium/ run- through
	100,00% (716, 704)	100,00% (474, 729)	00:00:56 (0,00%)	quantity 100,00% (161,251)	38,37% (0,00%)	22,50% (0,00%)

Page	Pagesview	Unique Pagesview	Avr. Time on website	Entrances	Failure rate	% exits
/	72 019 (10,05%)	47 651 (10,04%)	00:00:46	40 251 (24,96%)	19,73%	21,72%
/playbill/	48 064 (6,71%)	29 037 (6,12%)	00:00:47	(3,27%) 5 269	43,39%	17,77%
/order/?showId=2510 &eventDat e=201807071800	34 874 (4,87%)	24 559 (5,17%)	00:02:25	(3,19%) 5 138	70,65%	40,98%
/playbill/main_stage/2 020-02	31 205 (4,35%)	15 945 (3,36%)	00:00:53	(4,20%) 6 777	33,73%	21,42%
/m/playbill/2020-01	24 086 (3,36%)	15 612 (3,29%)	00:00:36	(5,32%) 8 581	17,31%	18,26%
/m/playbill/2020-02	22 115 (3,09%)	12 229 (2,58%)	00:00:45	(2,25%) 3 626	31,36%	18,54%
/playbill/main_stage/2 020-01	21 551 (3,01%)	11 452 (2,41%)	00:00:49	(4,23%) 6 822	28,70%	21,38%
/playbill/main_stage/2 020-03	17 943 (2,50%)	9 750 (2,05%)	00:01:01	(2,39%) 3 856	39,89%	25,14%
/repertoire/main_stag e/rizdvjana-ni ch.html	14 051 (1,96%)	7 357 (1,55%)	00:00:43	(1,28%) 2 060	56,07%	18,18%
/repertoire/	10 991 (1,53%)	6 601 (1,39%)	(1,64%) 2 643	15,25%	11,79%	

From the table you can see the period from 1st January, 2020 to 31st October, 2020 in which the site was viewed 716,704 times by the customers, including 474,729 unique views, 56 seconds - the average time spent on the Maria Zankovetska National Theatre website.

4. Conclusion

After having analyzed the structure of the Maria Zankovetska National Theatre website, we can see that it is based on the informational and educational functions. Recently, the growth of the commercial orientation of the website has been observed, which is primarily associated with the sale of the tickets online and which is becoming more popular. The authors of the website do not pay enough attention to the communicative function, which will play more important role in the attracting the new viewers, creating a positive image and influence the strategy of theatre development in a competitive artistic environment. After having made a thorough analysis of the functioning of the website in 2018-2020, it was concluded that the users of the Maria Zankovetska National Academic Ukrainian Drama Theatre

website are interested in its tendencies. After analyzing the functionality of the website of the Maria Zankovetska National Theatre, the authors proposed the methods to improve the functionality of the theatre website. Adding the form to the feedback and the event calendar will qualitatively change the functions of the website and improve its profitability. With these options, the viewers and fans can quickly find an event or show on the certain dates, write their feedback from the play they had seen, ask questions to their favorite actor, offer ideas to improve the service, expand the repertoire, upload their photos from the performances etc. The algorithms of the action and models of the adding feedback form and calendar of the events have been developed to the information resource of the website. The geo-statistics of the visiting the website by the users, users' activity statistics, and web page browsing statistics of the website operation have been analyzed for the last 3 years. Having analyzed the comparative data for 2018 and 2019, we can observe a slight decline in the interest in the website. The statistics testifies to a decrease in the number of shows, page views and the average duration of the session. The same method was developed to assess the profitability of the theatre website. It was given the statistics of the visiting the Maria Zankovetska National Theatre.

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