Enhancing the Journalist's Customer Experience in the Saudi Entertainment Industry: A Framework to Evaluate and Improve Digital Media Portals

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Abstract— This study addresses journalists' needs in the Saudi entertainment industry. It suggests ways to automate journalists' regular practices in the entertainment industry by analyzing their needs. A mixed-method study was conducted following explanatory sequential design. First, we published a 26-item questionnaire to journalists and media agencies to obtain their insights regarding the portal using two channels: Emails and WhatsApp. This phase was undertaken to measure (n=988) journalists' user experience on Virtual Media Center (VMC), then discuss points of development with the public relation team through the interviews. A customized version of the user experience questionnaire was crafted to measure a 12 usability scales. This phase was followed by a series of semi-structured interviews. Results indicate that VMC demonstrates a high level of hedonic and classic quality. Qualitative analysis indicates that the most important overarching theme for the VMC portal is ease of use. Virtual media centers portals have to be very easy and convenient to use for it to be the hub of information and a sustainable reference for journalists and media agents. These portals have potential to replace and automate all practices of the media center if it is advertised in advance and constantly evaluated to allow for constant improvement.

Keywords—customer experience, UX, entertainment industry, media portal, usability, user experience analysis, mixed-methods.

I. INTRODUCTION

Journalists play an active role in influencing consumer experiences and promoting several industries, especially the entertainment and tourism industries. In the entertainment sector, the customer's experience (CX) has always been crucial to success. Therefore, this element is of particular interest to entertainment stakeholders. To match their competition, entertainment firms must pay close attention to their customers' (including journalists') requirements and desires to provide a satisfactory entertainment experience. Collecting media material and sharing press releases is a task for organizations' public relations teams. Automating journalists' registrations and sharing material online between journalists and the General Entertainment Authority (GEA) can enhance the monitoring of journalists in the Virtual Media Center (VMC).

In the entertainment and tourism industries, the study of customer experience and its impact on satisfaction and behavioral intention reflects a broader scope. According to Collins' professional research, entertainment is defined by its commercial aspect, genre, audience, and content [1]. Several studies regarding consumer experience and satisfaction in the entertainment and tourism industries have been conducted by various researchers [2], as the entertainment business plays an important role in the global service economy [3] and in regional success [4].

Scholars and business practitioners have recently focused on entertainment and tourism to promote entertainment practices for the government sector [3]. Because entertainment events are paid for and reserved through an ecommerce system, frequent visits to a VMC are critical for advanced technology to collect user data, clicks, and interest pages to generate reports that promote organizational development [4].

In the Kingdom of Saudi Arabia, the main entity licensing entertainment activities is the GEA, which was founded in 2016 as part of Saudi Arabia's Vision 2030. Since that time, the GEA has been promoting and hosting various types of

events (such as plays, concerts, attractions, and seminars) via a website and social media platforms. The organization's mission has been to structure, license, build. and support the industry's infrastructure. entertainment industry (often unofficially called "showbusiness") encompasses a wide range subindustries. However, in the media, the phrase has been used most often to refer to companies that control the distribution and production of mass-media entertainment [5].

Because GEA is a pioneer in the entertainment industry, its public relations (PR) team has been seeking ways to improve the journalistic experience during difficult times, such as the coronavirus disease pandemic. After building its VMC portal, GEA has been evaluating ways of improving the media's journey throughout the Riyadh Season. Therefore, this research aims to 1) discovering journalists' needs by collecting and analyzing their feedback about the VMC and 2) providing suggestions for improving the VMC and ensuring that the GEA PR team can measure the performance improvement during various seasons.

The main question for this research is: How can the journalistic user experience (UX) be enhanced in the Saudi entertainment industry through digital media center portals?

Sub-questions emerged from the main question as follows:

RQ1. What is the quality of the current VMC portal from both GEA employee's and Journalists perspective?

RQ2. How could the portal be improved?

The contributions of this paper are:

- 1. To evaluate VMC usability by investigating Journalists user experience;
- 2. To identify gaps in the current VMC portal from GEA PR team perspectives;

To identify factors regarding how new media technologies, such as social channels, emails, and virtual media portals, can be leveraged to support the entertainment industry.

II. LITERATURE REVIEW

Journalism has been affected by modern technological developments, with a large amount of related work conducted and presented through social media and online platforms. In recent years, online journalism (digital newspaper) has been recognized as a successful field of journalism in its economic success, its broadening of journalism's financial base, and its cultural impact on people's lives [6]. The entertainment sector is one of the most prominent sectors affected by social media and digital journalism.

Due technological advancements, entertainment consumption has evolved over the last few decades. The rise of the internet has resulted in the creation of digital product markets, including various video-on-demand services. With each new form of consumption, a new business model has emerged, along with its own set of challenges. To persuade customers to make purchases, digital markets allow for the use of social signals, such as ratings and total product purchases. The impacts of social influence on consumer behavior have been observed in various circumstances [7], [8]. Product visibility can amplify these popularity signals. Recently, both theoretically and empirically, the combination of popularity signals and product visibility has been intensively studied by many authors, including Krumme, Abeliuk, and Maldonado [9]-[12].

Crown Prince Mohammed bin Salman unveiled Saudi Vision 2030 in April 2016, with the goal of diversifying the economy and reducing the kingdom's overdependence on oil. Saudi Arabia has announced several measures to achieve this aim by focusing on non-oil sectors, such as tourism and entertainment, which have been key development drivers in Saudi Arabia's economy. The expected result is an increase in inbound tourists and a decrease in outgoing tourism. The Saudi Commission for Tourism and National Heritage was founded to promote religious tourism and other tourism classes, such as entertainment. According to Saudi Vision 2030, the government aspires to become one of the world's most important tourism players, and the first in the Middle East [13].

The tourism industry is one of the key non-oil sectors with the ability to contribute to economic growth and development. Because of the presence of important Islamic holy sites within the kingdom, the country's tourism business has retained a long-standing reputation as a religious tourism destination, attracting religious travelers from all over the world [14]. The tourism business

in Saudi Arabia has recently focused on creating various niches to strengthen the entire sector, such as cultural, sports, recreational, and shopping festivals. Mega-festivals or entertainment events, which have been developed recently as a reaction to Vision 2030, are among these new tourism categories. These large entertainment events, known as the Saudi Seasons or city-based entertainment, are expected to help shift the kingdom's conventional image as a solely religious tourism destination and open new tourism sectors.

This study covers seasons or mega-events that occur in various locations or cities across the majority of Saudi Arabia. The concept of a "Saudi Season 2019" was originally proposed in mid-2018 as a partnership among various Saudi government departments overseen by the prime minister. The Saudi Seasons (or city-based entertainment) aim to turn the country into a world-class event tourism destination. These mega-events, which combine recreational, cultural, shopping, sporting, and business activities, have been created to provide travelers with a one-of-akind tourism experience. The Saudi Seasons, according to the chairman of the GEA, have been a major success, contributing significantly to the country's economy and its image as a distinctive tourism destination [14].

A. Related Work

While the subject of this study is novel and there is a scarcity of related studies and research, some studies that are relevant to one or more of the study variables are highlighted in this section.

The goal of the reported design process in [15] was to measure user experience quickly, easily, and instantly, while providing a comprehensive impression of the product user experience. Usability experts have collected terms and descriptions related to user experience and usability, including "hard" and "soft" aspects. To ensure the practical relevance of these aspects, an empirical study for item selection was used.

A user experience questionnaire (UEQ) was designed with 26 questions including the six aspects of: Attractiveness, Perspicuity, Efficiency, Dependability, Stimulation, and Novelty. Conducted studies on the original German questionnaire and the English version show a good level of reliability and construct validity. Users

were asked to complete the experimental task of filling in the experience questionnaire. Each question consisted of a contrasting pair. The users completed the UEQ twice: once for an alternative representation of video via feature extraction (RAAVE) and once for the baseline. This approach was used to enhance the exploration experience of video content. The same method was used in [16] to measure the user experience of software products in several empirical studies. Users were asked to perform an experimental task by completing two forms of UEQ to provide a comparison of user experiences in the two systems.

Likewise, Albarq [17] has investigated the impact of web atmospheric clues on Jordanian buyers' purchase intent and the effects of website gratification interventions. The majority of the data collection for validating the study model, which used a survey method, occurred in Amman, Jordan's capital. The data-gathering period in Amman lasted from July 2019 to January 2020 [18]. The data were analyzed with the AMOS 22.0 program, using the structural equation modeling approach. Confirmatory factor analysis was used to determine the measurement model's convergent and discriminatory legitimacy. The pleasure factor effectively balanced the impact of website indications on purchase intent. Purchase intent was a result of the satisfaction engendered by these factors. Using the findings of this study, Jordanian e-retailers and marketers should be able to analyze the impact on satisfaction of different stimulating elements for web-related services. It is the responsibility of online retailers to guarantee that the most powerful atmospheric factors affecting customer happiness are present on a website. This study found that web managers should devote further resources to aspects that increase the excitement value of web portal atmospheres among Jordanians.

Moreover, Rather and Sharma [19] have investigated the impact of CX on customer loyalty and recollection. Using a suitable sampling strategy, data were obtained from 170 visitors and customers, comprising 98 nationals and 72 foreign tourists, in four different tourist cities and sites in Jammu and Kashmir, India (namely, Gulmargh, Srinagar, Phalgam, and Jammu). Following confirmation of data reliability, mean values, standard deviations, correlations, and simple and

multiple regression analysis were used to examine the data. The findings implied that CX has an impact on consumer loyalty and recall. The article examined the connections among consumer experience, recollection, and loyalty, which should be extremely useful to marketers. This study is important because its findings can be used to improve and manage customer experience. It can also assist marketers in better understanding customer differences and implementing promotional, segmentation, and positioning strategies that contribute to their recollection and loyalty. The study has contributed to knowledge and understanding of CX management, and it can be utilized to help managers make decisions [19].

The main concept of VMC portal is to build a transparent news platform, collaborating with news publishers to provide news articles with evidence for online news readers. Then, understanding and measuring the Customer experience so online news readers can obtain detailed information about events. To create an engaging and understandable experience for users, this study made to evaluate and improve the VMC portal.

III. METHOD

This research was conducted as a mixed-method study as combining qualitative and quantitative methodologies can produce more comprehensive results for a study subject than either method alone [44]. According to Sieber, quantitative data assist in the generalization of qualitative data and provide context for qualitative findings during the data analysis stage. Qualitative data can assist by establishing and giving meaning to quantitative results [21].

A. Study Design

An explanatory sequential design was conducted in this research. The flexibility of mixed-method designs allowed us to gain valuable insights. The starting phase was to publish the questionnaire to journalists and media agencies to obtain their insights regarding the VMC portal. This phase was undertaken to measure user experience and then discuss points of development with the GEA PR team through the interviews. Testing of the function and content on the VMC portal began on April 9, 2023, and ran until May 17, 2023. The participants in UX were journalists

and their reviews were analyzed using the UEQ and UEQ+. The second phase was to conduct interviews with employees from GEA PR team to obtain further information regarding the response results and determine where the development intersected with the portal objective and the employees' visions of the VMC. The interviews occurred between May 17 and May 23, 2023.

B. Participants

The participants in the current study were journalists and employees from GEA (PR team). Journalists were the main target audience who provided their feedback and for whom we needed to enhance the VMC portal services. In this study, Journalist term refers to all employed who work at journals, newspapers, radio and television stations, magazines, or any other media channels (audio, video, written media).

The GEA PR employees provide media material to journalists. To achieve quality measurement from the PR team perspective, the participant employees were experienced and specialized in PR with various media backgrounds.

C. Instruments and Measurement

To collect the data, UEQs were developed based on previous studies. Several additional questions were added to the questionnaire to create a customized user experience questionnaire plus (UEQ+) that served the VMC. We have included UEQ+ in this research to gain a pragmatic result and concrete evaluation. The questionnaire consisted of two main parts:

- Part one: The UEQ long version assessed the overall experience of a user on the VMC. The questionnaire was designed online and consisted of 26 items that allowed for an extensive study based on the theoretical UX framework introduced by Hassenzahl [22]. Where the first part of the questionnaire measuring aspects of attractiveness, efficiency, perspicuity, dependability, stimulation, and novelty.
- Part two: The customized questionnaire topics were split into two main axes: the journalistic experience, and the entertainment industry. Each axis was reflected in a set of questions that the journalistic were expected to respond to.

This part was extended to apply to the VMC services and customized the questions per UEQ+ approach [23]. The journalists were asked to rate the importance of each aspect of (visual aesthetics, response quality, intuitive use, trust, quality of content, trustworthiness of content) while testing the portal services on a seven-point Likert scale.

The respondents were asked to optionally state their personal information (e.g., name, job title, etc.). Each item consisted of two opposite meanings for the answers (e.g., attractive or unattractive). The items were derived randomly per Laugwitz Held and Schrepp [16]. In this research, the first half of the group began with a negative term, while a positive term started in the other half. This procedure could help to evaluate responses later during the analysis process. The responses ranged within a seven-stage scale, in the value range of -3 to +3. A zero value indicated a neutral rating. If a respondent had rated the product from easy to complicate, with a 7 on a seven-point scale, it would have been suspicious if the same respondent had rated it from confusing to clear with a rating of 6, as it would not be plausible that the product had been perceived to be both complicated and clear at the same time [16]. Finally, one open-ended question was included to obtain textual feedback regarding what journalists would like to suggest having on the portal. When the respondents arrived at the end of the questionnaire, they were thanked for their participation.

On the other hand, for the qualitative part, semi-structured interviews were conducted with GEA PR team. The aim was to make the interview more flexible for the participants' answers and to give them space to reflect on their goals and the portal's qualities.

D. Analysis

- 1) UEQ Analysis: The UEQ metrics viewed from the aspects of attractiveness, efficiency, perspicuity, dependability, stimulation, and novelty. Those metrics have been defined as follows:
 - Attractiveness: What is the overall perception of the service or product? Do users enjoy the product?
 - Efficiency: Can users perform their activities without exerting undue effort?

- Perspicuity: Is it easy for the user to become familiar with the product? Is it simple to determine how to use the product?
- Dependability: Does the user perceive that they have control over the interaction?
- Stimulation: Is the product enjoyable to use and motivates you to do so?
- Novelty: Is the product novel? Is it unique and innovative? Has the product been designed in the users' best interests? [24].

Journalist were particularly familiar with the portal during their interaction with the VMC. Because they used to perform some tasks according to their role, they were required to upload their media materials (photos, articles, press release, television reports, etc.), rate events, check season fact sheets and press releases, and other related actions.

To measure the accuracy of the estimated average of the scale, we needed to determine the confidence interval. A smaller confidence interval indicated higher measurement precision and a more reliable result. The confidence interval measurement in the study was 5% (0.05), and it was also the scale average for the displayed items. The suggested benchmark of a 5% confidence interval for the alpha coefficient was calculated according to Bonett [25], where the alpha coefficient, as Cronbach mentions [26], is a measure of the consistency of the scale. The response distribution of each question item helped to gain deeper insight into the six aspects of the portal and whether the experience of the users had tended to be positive or negative.

Next, reliability was used to measure the questionnaire's consistency, which is considered an indicator of the variables. This test was performed by examining the value of the Cronbach's alpha based on its research aspect, where if the value was above 0.6, then the aspect was considered reliable.

The next step was to calculate the mean, variance, and standard deviation of the 26 UEQ question items for each respondent's answers. If the scale means of standard interpretation values between -0.8 and 0.8, then represent a neural evaluation of the corresponding scale. While if value > 0.8, it represented a positive evaluation,

and if value < -0.8, it represented a negative evaluation [27].

The difference in UEQ+ rather than UEQ was that the scheme was changed in items ordered, where the negative term was left, and the positive term was right for the UEQ+. This change would cause unnecessary confusion if it were applied to the UEQ. The same steps of calculating means, standard deviation, confidence intervals for the scales, importance ratings, and single items were followed for the UEQ+. The other difference was that researchers had the option to customize the scales to fit the product or service. The reasonable range of scales was 5–6 scales, as suggested in the UEQ+ handbook [27], to keep it short, especially for online questionnaires.

Next, evaluation of the average UX for the portal was performed to present the average value of questions items according to a group of UEQ and UEQ+ scales. The averaged data for each item of UEQ were then compared with other products contained in the benchmark that had been determined previously [28].

2) Interview Analysis: We have applied thematic coding to the interview data to identify themes and subthemes regarding users' experience with VMC. thematic coding makes it easier to manually parse the text, tag specific feedback with topics, and organize those topics. Thematic analysis fits a mixed-methods approach and was effective in collaborating with other users and building research repositories.

The following steps in this analysis were guided by Braun and Clarke's approach to thematic analysis as an accessible method for qualitative analysis (interviews in our case). The thematic six-phase guide illustrated following in Fig.1 [30].

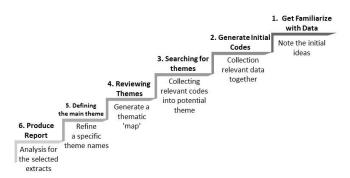


Fig. 1. Thematic Analysis Phases

The first step was to transform the interview speech into transcription data to make it easier for the analyzer to get familiar with the data and take an initial note. During this stage, the researcher transcribed only the verbal data to create the first ideas about themes and patterns.

Next, the data were coded. Coding in thematic means highlighting text sections into phrases and labelling them to describe a certain content that is identified as "codes." The code was considered a piece of information within the data that was associated with the research question. While going through the text, data were collated together into groups of codes that allowed the researcher to gain an overview of the key points and common meanings that were repeated throughout the data.

For the third step, the analysis went deeper on an interpretive level, to create themes. Several codes were put into relationships with interpretation to combine and create a single theme. The goal in this phase was to identify main themes and potential subthemes on a thematic map. Themes were broader than codes.

The thematic map in the following step was rescored to assess its validity against the entire dataset. Next, the core point of each theme was captured after the map was created. Last, all the results were put together to formulate the analytical result and give an answer to the research question.

Analysis of the interviewers' answers was approached using conventional qualitative thematic analysis. Recorded interviews with GEA PR team (six employees) were transferred to text transcript by the researcher, then the entire text was repeatedly read to establish familiarity with the dataset. The interviews were analyzed by systematically coding them based on content. Matching the code with segments of selected data was representative during the coding process and was carried out manually by the author.

The process is presented as a linear process, but it is important to stress that this process was iterative and involved a continuous shifting back to the participants' narratives to make sure that it was representative of codes and final themes.

IV. RESULTS AND DISCUSSION

A. Results

The respondents were asked to test the portal, vmc.gea.gov.sa, as an initial step before moving forward to answering the questionnaire, especially if they were not familiar with the website. 104 respondents from journalistic participated in the study. Participants were asked to assess VMC portal with respect to attractiveness, efficiency, perspicuity, dependability, stimulation, novelty. Each respondent completed the questionnaire within approximately nine minutes.

In the first part of the study, we followed the original UEQ form in Table 2, which was analyzed separately. The second part comprised customized questions that followed the UEQ+ scoring and measured UX items as well.

1) UEQ Analysis Result:

We calculated the scale values for each aspect. The 26 questions in Table 1 were used as standards for measurement using the UEQ method. Testing using the UEQ method was conducted to gather user feedback on the interface design that was provided by the VMC portal. The respondents filled out the questions by providing answers on a scale of 1 to 7, where 1 refers to -3 and 7 refers to +3. The 104 respondents filled in the answers based on their testing of the portal and their observations.

TABLE I. THE USER EXPERIENCE QUESTIONNAIRE ITEMS

		1 2 3 4 5 6 7	
1	annoying	0000000	Enjoyable
2	not understandable	0000000	Understandable
3	creative	000000	Dull
4	easy to learn	0000000	difficult to learn
5	valuable	0000000	Inferior
6	boring	0000000	Exciting
7	not interesting	0000000	Interesting
8	unpredictable	0000000	Predictable
9	fast	0000000	Slow
10	inventive	0000000	Conventional
11	obstructive	0000000	Supportive
12	good	0000000	Bad
13	complicated	0000000	Easy
14	unlikable	0000000	Pleasing
15	usual	0000000	leading edge
16	unpleasant	0000000	Pleasant
17	secure	0000000	not secure
18	motivating	0000000	Demotivating
19	meets expectations	000000	does not meet expectations
20	inefficient	0000000	efficient
21	clear	0000000	confusing
22	impractical	0000000	practical
23	organized	0000000	cluttered
24	attractive	0000000	unattractive
25	friendly	0000000	unfriendly
26	conservative	0000000	innovative

At this stage, the mean, variance, and standard deviation values were calculated. Each item was specified in the questionnaire. The calculation results shown in Table 2 represent the range of values that we estimate to fall between if we redo the test, within a certain level of confidence. The represented columns used to categorize each calculation result.

TABLE II. MEAN VALUE, AND STANDARD DEVIATION PER ITEM

Ite	Mea	Std.	Confiden	Confidence	
m	n	Dev.	ce	inte	rval
1	1.72	1.484	0.285	1.436	2.00
	1				6
2	1.74	1.564	0.301	1.440	2.04
	0				1
3	1.56	1.761	0.339	1.229	1.90
	7				6
4	1.74	1.660	0.319	1.421	2.06
	0				0

_	1.70	1.507	0.205	1 402	2.00
5	1.78	1.587	0.305	1.483	2.09
	8	1 757	0.220	1 100	3
6	1.51	1.757	0.338	1.182	1.85
7	9	1.635	0.314	1.349	7 1.97
/	1.66	1.033	0.314	1.349	1.97
8	1.43	1.630	0.313	1.119	1.74
0	3	1.030	0.313	1.119	6
9	1.56	1.734	0.333	1.234	1.90
9	7	1./34	0.333	1.234	0
10	1.62	1.730	0.333	1.292	1.95
10	5	1./30	0.555	1.292	1.93
11	1.72	1.715	0.330	1.392	2.05
11	1.72	1./13	0.550	1.392	2.03
12	1.88	1.656	0.318	1.566	2.20
12		1.030	0.518	1.300	
12	5 1.65	1.593	0.206	1.348	3
13		1.595	0.306	1.348	1.96
1.4	4	1 770	0.242	1 120	0
14	1.46	1.779	0.342	1.120	1.80
1.5	2	1.765	0.220	0.000	3
15	1.32	1.765	0.339	0.988	1.66
1.0	7	1 (7)	0.222	1.004	6
16	1.60	1.675	0.322	1.284	1.92
17	6	1 (((0.220	1 450	8
17	1.77	1.666	0.320	1.459	2.09
10	9	1.706	0.222	1 2 4 1	9
18	1.67	1.726	0.332	1.341	2.00
10	3	1 (71	0.221	1 222	5
19	1.65	1.671	0.321	1.333	1.97
20	1.76	1.670	0.222	1 446	5
20	1.76	1.679	0.323	1.446	2.09
21	9 1.70	1 700	0.227	1 275	2
21		1.700	0.327	1.375	2.02
22	2	1 (01	0.225	1 444	9
22	1.76 9	1.691	0.325	1.444	2.09 4
22		1 720	0.224	1.320	
23	1.65	1.739	0.334	1.320	1.98
24		1 740	0.226	1 270	8
24	1.61	1.748	0.336	1.279	1.95
25	5	1 622	0.312	1 // 10	2.07
25	1.76	1.622	0.312	1.448	2.07
26	0	1 675	0.222	1 200	2.04
26	1.72	1.675	0.322	1.399	2.04
	1				3

The average UEQ scale results are shown in Table 3. This table shows the average scores for all question items according to their group. Average attractiveness, clarity, efficiency, accuracy, stimulation, and novelty gained neutral values.

TABLE III. RESULTS OF MEANS CALCULATION IN THE UEQ SCALES

UEQ Scales (Mean and Variance)				
Attractiveness	1.675	2.28		
Perspicuity	1.709	2.29		
Efficiency	1.690	2.52		
Dependability	1.647	2.23		
Stimulation	1.661	2.50		
Novelty	1.560	2.71		

The results of testing the six aspects of the UEQ were positive. No aspect was found negative. All the six UX aspects were above the 0 scale, which means above the average score. The average data for each of the six aspects of the UEQ scale were compared with other products contained in the UEQ benchmark as seen in Fig. 2.

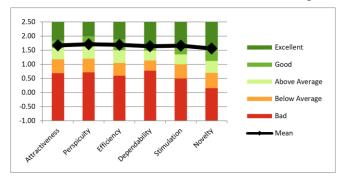


Fig. 2. Graph of the results in the test of the user experience questionnaire on the Virtual Media Center portal

The test results were as follows:

- In the rating scale of attractiveness, efficiency, dependability, stimulation, and novelty were resulted as "Good" average. The good category classified in the benchmark as 10% of the results in the benchmark data set are better and 75% of the results are worse. This means that the Thus, the portal according to the respondents was attractive enough to meet the users' expectations.
- In the perspicuity rating scale, the mark was above average according to the respondents.
 That indicates 25% of the results in the benchmark are better than the result for the

evaluated product, 50% of the results are worse. The portal had above average perspicuity and was suitable for the users' expectations. This means that VMC portal is easy to get familiar with and to learn how to use it.

2) Customized UEQ+ Analysis Result:

The UEQ+ was a flexible framework that allowed for the development of UEQs. The researchers selected the scales that fit the research question from a list of 16 available UX scales. No UEQ+ scales are currently available to measure the quality of the UX on media portals. Due to this limitation on digital portals, some of the possible products and usage scenarios could be evaluated using the UEQ+. In this paper, we describe the construction of six specific scales to measure the UX of the VMC portal. We discuss how these new scales can be combined with existing UEQ scales in the same project.

The following results present the VMC portal UX of the six scales of the UEQ+, namely, visual aesthetics, response quality, intuitive use, trust, quality of content, and trustworthiness of content. The results are presented in Table 4.

TABLE IV. THE MEAN, VARIANCE, AND CONFIDENCE INTERVAL PER SCALE FOR THE VIRTUAL MEDIA CENTER

Scale	Mean	Vari- ance	Std. dev.	Conf idenc e	Confidence Interval	
Visual Aesthetics	1.77	2.57	1.60	0.31	1.46	2.07
Response Quality	1.99	2.75	1.66	0.32	1.67	2.31
Intuitive Use	1.67	3.16	1.77	0.34	1.33	2.01
Trust	1.96	2.62	1.62	0.31	1.65	2.27
Quality of Content	1.98	2.43	1.56	0.30	1.68	2.28
Trustworthin ess of Content	2.13	2.60	1.61	0.31	1.82	2.44

The results show that the means were transformed from -3 to +3 and the results were all positive. The mean values of all the scales were >1, which shows an excellent result for the VMC portal. In addition, the confidence interval in which values were all >1 shows a good confidence level. The UEQ+ scale also provided the mean importance ratings and showed the importance of a scale based on its value, as can be seen in Table 5.

TABLE V. MEAN IMPORTANCE RATINGS FOR THE VIRTUAL MEDIA

Scale	Mean	Confidence	Confidence Interval	
Visual Aesthetics	1.52	0.31	1.21	1.82
Response Quality	2.23	0.30	1.93	2.54
Intuitive Use	1.81	0.38	1.42	2.19
Trust	1.07	0.49	0.58	1.55
Quality of Content	1.55	0.38	1.17	1.93
Trustworthiness of Content	1.58	0.36	1.23	1.94

The mean importance rating value of the VMC portal indicates that all the scales are important as long as the means and confidence intervals are > 1 on all scales. This indicates that users considered all the scales as relevant to the portal. The previous table presents its scale under the mean value. The consistency value is measured by Cronbach's alpha, as outlined in Table 6.

TABLE VI. SCALE CONSISTENCY OF THE USER EXPERIENCE QUESTIONNAIRE+ FROM THE JOURNALISTS' FEEDBACK

Scale	Cronbach's Alpha
Visual Aesthetics	0.95
Response Quality	0.92
Intuitive Use	0.92
Trust	0.96
Quality of Content	0.92
Trustworthiness of Content	0.91

As indicated in Table 5, adequate scale consistency implies that the adapted UEQ+ was reliable in the six-scale measurement of UEQ+. This finding show that, based on such experience, different views are found when new factors are measured. The qualities of "response quality" and "intuitive use" have a positive value of mean importance, as shown in Table 5. As a result, "Trust" indicates the highest scores on consistency scale. which indicates that journalists depend on the VMC portal as a source of information.

Nevertheless, both qualities of "trust" and "Response Quality" have a positive mean importance rating, as shown in Table 6, thus making both qualities relevant for inclusion in the measurement.

The idea behind merging UEQ and UEQ+ is to assign a major scale for digital media platforms

such as VMC. In practice, there are two established instruments for user experience.

According to the long version of UEQ, potential for improvement was in the scale of Perspicuity was the most important factor as it was noted above Average. While In UEQ+ analysis, the scale Trust were relatively highly rated on user experience consistency scale. This means that the Journalist are more than fulfilled of VMC, and there is no potential improvement for the portal regarding this factor or the other scales.

Since the Journalist user feels that all scales are important, the recommendation in this case is to point out that UEQ can used the short version, in addition to our customized UEQ+ form for future work on media portals.

3) Interview Analysis Result:

Ease of use and content availability are the two main overarching themes resulted from the interviews. PR team refer to as platform success criteria. Thematic analysis allowed us to identify all relevant factors and their contribution as success factors. The outlined development of the basic theme form of our analysis findings is shown in Table 7.

TABLE VII. THEMATIC ANALYSIS: FROM CODES TO GLOBAL THEME

	Code	Basic Theme	Organizing Theme				
- - -	PR depends on digital media technologies and main communication on WhatsApp and email. PR team consider a guide to journalist. PR looking to automate all publishing process. PR looking for decreased communication in-person with journalist to 10%	PR depends on digital media technologies and looks forward to automating all publishing processes and decreasing communication in-person to 10% with journalists	Automation of publishing process and systems integration saves time and increases portal efficiency				
-	Suggested feature to be added: notification. Application version from VMC. It is not a need but would increase reach, availability and credibility for VMC	System integration and customization features for journalists will increase efficiency and save time for both journalists and PR team	Response quality, ease of use, content availability are the quality measurements from a PR perspective. Sustainability of the platform is considered a success measurement for VMC				
-	Future goal: include AI and Chat GPT on the portal. Suggest adding a section representing entity effort and success story of numbers of visits and beneficiaries, variety of content, and reflect international visits from media agencies. Portal categorization, and content classification Integration for access permit is a must for upcoming development as faster process and more quality needed since time is a challenge during this phase	Technology improvement by creating an application version of VMC that includes a notification system and AI					
- - - - -	Quality measurement: response quality, ease of use, content availability Journalists trust the VMC portal. All existing features are useful. PR team satisfied with current features on VMC. Reach is one of the success criteria, and content availability. User friendly system Success rate: increase use of coverage feature, and use platform during the whole year, not only seasonally	4. Response quality, ease of use, content availability are the quality measurements from a PR perspective. Sustainability of platform considered a success measurement for VMC	Awareness of portal ownership by GEA. Collecting journalist feedback is a success measurement that has a direct effect on credibility and user trust				
-	The current journey distracts journalists in some phases. Goal is to make regular users interested to have same privilege as journalist users. Sharing questionnaire and collecting users' feedback is the	5. Awareness campaign for VMC features and capabilities and how they can serve journalists, and clarify its ownership by GEA to increase credibility					
-	success measurement. Do awareness campaign for VMC features and capabilities and how it can serve journalists, and clarify its ownership by GEA to increase credibility. Suggested feature: customize features for journalists to get the material with best resolution. Must differentiate between GEA news and content of VMC that specializes in events and season	•					

AI = artificial intelligence; GEA = General Entertainment Authority; PR = public relations; VMC = Virtual Media Center.

The three main overarching factors include system automation and ease of use, response quality and content availability and finally awareness factors.

a) The digital publishing process and system integration save time and increase portal efficiency: Automate all publishing processes to increase the system's dependability factor on the VMC. A dominant theme that all participants stressed on was that automating the publishing process through the VMC portal would increase portal efficiency measurement.

Participant #5 stated that digital journalism is growing quickly, and GEA's objective is to be one of the pioneers in digital transformation. To achieve that and be a leader in the entertainment industry, the PR team considered that automation of all manual tasks, such as publishing content and sharing with media agencies, would have a positive effect on portal efficiency.

System integration. Integrating with the access permit system was one of the reasons behind initiating the VMC in its early stages, but this feature has been held back in its second season of use because of the time-consuming registration process. Participant interviews confirmed that journalists are willing to use a portal for registration to gain their access badges faster at future events. Participants stated that integration with the accreditation system (which provides access permits) would save time for the PR team, media agencies, and journalists.

Integration in the future could be achieved by creating an app version of the VMC, including Chat GPT and push notifications for journalists, through the portal.

b) Response quality, ease of use, and content availability are the quality measurements from a PR perspective. The sustainability of the platform is considered a success factor for the VMC: Ease of use and content availability are quality factors of the VMC portal. The dominant concern related to the use of a portal was the ease of accessing information. Several participants had come across the idea that the clarity and availability of updated content contribute to user trust.

The activities the portal features by adding content throughout the whole year, not only seasons, are playing a significant role in increasing credibility among journalists and increasing loyalty.

c) Awareness that portal ownership is by GEA and collecting journalist feedback is a success factor that has a direct effect on credibility and user trust: Awareness campaign for VMC features and capabilities increases credibility. Another concern raised was the effect the VMC portal has regarding its features and capabilities. **Participants** were under impression that journalists and media agencies need an awareness campaign to represent all VMC features, objectives, and how it is customized to serve journalistic needs. One of the awareness campaign goals would be to indicate that the VMC is one of the GEA services that specializes in event content and to clarify that its scope and content are different from the GEA's.

Participants #2 and #3 were excited by the idea of seeing journalist feedback periodically through the system, which would increase the credibility of the system because journalists could share their experiences and provide their needs through short questionnaire responses.

At the end of the thematic analysis, we sough that a quality factor can be drawn from the interviews to increase VMC "ease of use" quality scale. Analysis was answering the research objective regarding identifying portal gaps, where new automation practices are missing in many areas through Journalist journey. This gap creates potential research finding to include content and make its availability easier for Journalist and media agencies. Process automation as well would be another important aspect for mapping the digital media portals quality scales.

The second area of interviews influence from PR perspective is the need of awareness in VMC added value to the Journalist, and what make the portal different than the physical media center. Spot the light on VMC specifications and establishing a marketing campaign is a crucial importance to the VMC to be actively acknowledged.

The result of this study is specified comprise the research questions and outcomes that lead to the

study main objective as shown in Fig. 3.

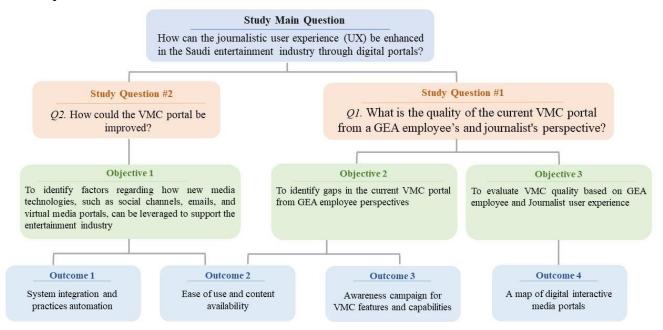


Fig. 3. The VMC research questions and outcomes

B. Discussion

Analyzing the results and the validating the study's use of a UEQ allow a fast evaluation for the UX through an interactive platform. It does not only measure usability but also the aspects of attractiveness, perspicuity, efficiency, dependability, stimulation, and novelty. Since the UEQ has a form of semantic differential scale, it was important to customize a questionnaire to measure our targeted quality aspects that the regular UEQ did not include.

Thus, the merged UEQ+ form allowed us to look at deeper aspects that were not included in the UEQ. These aspects are visual aesthetics, response quality, intuitive use, trust, quality and trustworthiness of content. Further forms were included to provide an extensive picture of VMC portal and the services it provides from a practical point of view.

The two types of questionnaires validated the study objective, where all UX factors resulted in a positive score ranging as good average. "Trust" gained the highest scores, which indicates that journalists depend on the VMC portal as a source of information and trust that the content has a good scale of user experience. This evaluation of the UX corresponds with the interview analysis, where the PR teams indicated that one of the portal

objectives is to be the hub of information and a sustainable reference for journalists and media agencies.

The overall factor structure, relative to the thematic analysis of the "ease of use" scale, could be the focus in future studies, because all PR team answers indicated that such factor would enhance the quality of journalists' experience through the portal.

The integration of UEQ and UEQ+ tools were conducted, to create a map of media platforms evaluation in comparison to other products. The paper suggested a UEQ+ form to measure the quality aspects of media portals based on the services they provide for Journalists, customizing a list of questions that can used as benchmark for media platforms. VMC is an Arabic platform which generated information about events and seasons that match journalist needs. Evaluation results indicate that measuring multiple scales can identify the usability scale of any media platforms. The generated result was greater than the mean averaged scaled >.7 of the value of Alpha-coefficient, where the mean of "Trust" scale sufficiently valid and it's valued by 0.96. When the correlation value validates consistency, that means that journalist put a big

trust in VMC as resource of information and reference for their content.

Furthermore, according to the experiences shared through interviews, all participants agreed that the nature of the tasks needs to be performed in an easier way than the existing process.

Moreover, the GEA PR team were focusing on unmeasurable scale by our questionnaire, which are "ease of use", and "content availability" scales. These quality measurements answer our study question: Q1. What is the quality of the current VMC portal from a GEA employee's perspective? This does not mean that the measured scales are not taken into consideration, but it would be beneficial to include "ease of use" scale that Journalist have the chance to improve their journey through visiting the portal in upcoming questionnaires. Automation publishing process and systems integration would support the scales of perspicuity, and this counted as limitation of the quantitively framework.

As mentioned earlier in the results, there is also a need to establish awareness campaign of portal ownership to GEA, achieving that has direct effect on credibility, and user trust. These initiatives can take the form of successful stories for team effort behind the scenes, how VMC would serve Journalists. Through the interviews, the study

includes improvements that can be added to the portal and answer study question: Q2. How could the portal be improved? By automation PR process, establishing awareness campaign, and do frequent questionnaire for continuous improvement on long term.

Lastly, the difficulties were to ask the Journalist to go through the whole questionnaire. Many media individuals were unpleasurable to fill a new type of questionnaire, from this point, our study recommendation while applying the same framework is to use UEQ+ only, with the shortest version of UEQ.

The integration of customized user experience tool with another general valid UX instrument, such as UEQ, have proved beneficial when it comes to measuring quality and content of digital media. UEQ and UEQ+ tools can be used for creating a map of measuring media platforms. Following the study customized UEQ+ form is suggested to be used with the short version of UEQ to gain best result of information that covers user experiences scales. Furthermore, this study suggests a framework for initialing portals of virtual media centers. The suggested framework includes three phases pre-, during- and postdevelopment as shown in Fig.

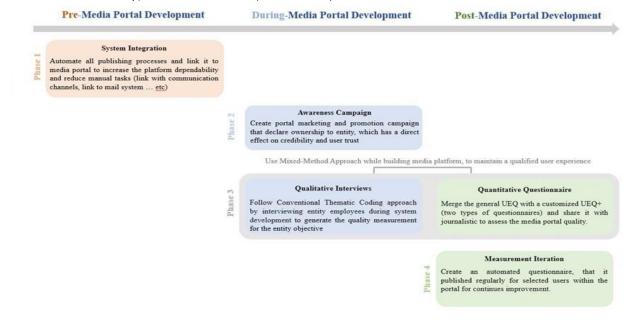


Fig. 4. Framework for initiating media portals

V. FUTURE WORK

As part of future research, further feedback is needed to understand journalists' needs over time, in more detail. The quality aspects of the portal could be changed after development to measure another challenging scale of UX. Based on GEA PR teams' suggestions through interviews, this process could be automated through the VMC and targeted to a random group of journalists periodically. We need to examine user feedback with a shorter version of the UEQ or another method to make the feedback process easier for media users.

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REFERENCES

- C. Collis, "What is entertainment? The value of industry definitions," in: Entertainment values. Palgrave entertainment industries, S. Harrington, Ed. London: Palgrave Macmillan, 2017, pp. 11–22, doi: 10.1057/978-1-137-47290-8_2.
- [2] S. Parikshat, S. Manhas and R. Singh, "Customer experience and its relative influence on satisfaction and behavioural intention in hospitality and tourism industry," SAJTH, vol. 6, no. 1, pp. 53–68, Jan. 2013.
- [3] J. M. Luo, C. F. Lam and D. Fan, "The development of measurement scale for entertainment tourism experience: a case study in Macau," Current Issues in Tourism, vol. 23, no. 7, pp. 852–866, 2020, doi: 10.1080/13683500.2018.1556251.
- [4] R. Tahmaseb, "Advances in technology to help Saudi amusement & entertainment industry," in: Saudi Gazette, 2023 [Online]. Available: http://saudigazette.com.sa/article/545226
- [5] L. Van Der Wagen, Events management. For tourism, cultural, business and sporting events. Melbourne, Victoria, Australia: Pearson cop, 2010.
- [6] F. Hanusch, "A profile of Australian travel journalists' professional views and ethical standards," Journalism, vol. 13, no. 5, pp. 668–686, 2012, doi: 10.1177/1464884911398338.
- [7] C. Tucker and J. Zhang, "How does popularity information affect choices? A field experiment," Management Science, vol. 57, no. 5, pp. 828–842, Mar. 2011, doi: 10.1287/mnsc.1110.1312.
- [8] G. Viglia, "Definition of online marketing," in: pricing, online marketing behavior, and analytics, G. Viglia, Ed. New York, NY, United States: Palgrave Pivot, 2014, pp. 4–22, doi: 10.1057/9781137413260_2.
- [9] C. Krumme, M. Cebrian, G. Pickard and S. Pentland, "Quantifying social influence in an online cultural market," PloS one, vol. 7, no. 5, e33785, 2012
- [10] A. Abeliuk, G. Berbeglia, M. Cebrian and P. Van Hentenryck, "The benefits of social influence in optimized cultural markets," PLoSone, vol. 10, no. 4, Apr. 2015.
- [11] A. Abeliuk, G. Berbeglia, M. Cebrian and P. Van Hentenryck, "Assortment optimization under a multinomial logit model with

- position bias and social influence," 4OR, vol. 14, no. 1, pp. 57-75, Mar. 2016.
- [12] F. Maldonado, P. Van Hentenryck, G. Berbeglia and F. Berbeglia, "Popularity signals in trial-offer markets with social influence and position bias," European Journal of Operational Research, vol. 266, no. 2, pp. 775–793, 2018.
- [13] M. M. Aliedan, A. E. E. Sobaih and I. A. Elshaer, "Influence of cities-based entertainment on tourist satisfaction: mediating roles of destination image and experience quality," Sustainability, vol. 13, no. 19, pp. 1–14, Oct. 2021.
- [14] N. Habibi, "Implementing Saudi Arabia's vision 2030: An interim balance sheet," Middle East Brief, vol. 127, pp. 1–9, Apr. 2019.
- [15] F. A. Salim, F. Haider, S. Luz and O. Conlan, "Automatic transformation of a video using multimodal information for an engaging exploration experience", MDPI, Applied Sciences, vol. 10. no. 9, 3056. Apr. 2020, doi: https://doi.org/10.3390/app10093056
- [16] B. Laugwitz, T. Held and M. Schrepp, "Construction and evaluation of a user experience questionnaire," in: HCI and Usability for Education and Work, A. Holzinger, Ed. Berlin, Germany: Springer, 2008, pp. 63–76, doi: 10.1007/978-3-540-89350-9_6.
- [17] A. N. Albarq, "Effect of web atmospherics and satisfaction on purchase behavior: stimulus-organism-response model," Future Business Journal, vol. 7, no. 62, 2021, doi: 10.1186/s43093-021-00107-3.
- [18] M. Aldoghan and A. Albarq, "The effects of hedonic and utilitarian values on e-loyalty: Understanding the mediating role of esatisfaction," International Journal of Data and Network Science, vol. 6, pp. 325–334, doi: 10.5267/j.ijdns.2022.1.005.
- [19] R. Rather and J. Sharma, "Customer engagement in strengthening customer loyalty in hospitality sector," European Journal of Tourism, Hospitality and Recreation, vol. 8, 2017.
- [20] J. W. Creswell, Research design: qualitative, quantitative, and mixed methods approaches. 4th edition, London, UK: SAGE Publications, 2013.
- [21] S. D. Sieber, "The integration of fieldwork and survey methods," American Journal of Sociology, vol. 78, no. 6, pp. 1335–1359, 1973.
- [22] M. Hassenzahl, "The effect of perceived hedonic quality on product appealingness," International Journal of Human-Computer Interaction, vol. 13, no. 4, pp. 481–499, 2001, doi: 10.1207/S15327590IJHC1304_07.
- [23] A. Klein, A. Hinderks, M. Schrepp and J. Thomaschewski, Construction of UEQ+ scales for voice quality. Berlin: Springer, 2020, doi: 10.1145/3404983.3410003.
- [24] A. Saleh, H. A. Addous, I. Alansari and O. Enaizan, "The evaluation of user experience on learning management systems using UEQ," International Journal of Emerging Technologies in Learning (iJET), vol. 17, no. 7, pp. 145–162, Apr. 2022, doi: 10.3991/ijet.v17i07.29525.
- [25] D. B. Bonett, "Sample size requirements for testing and estimating coefficient alpha," Journal of Educational and Behavioral Statistics, vol. 27, no. 4, pp. 335–340, 2002.
- [26] L. J. Cronbach, "Coefficient alpha and the internal structure of tests," Psychometrika, vol. 16, pp. 297–334, 1951, doi: 10.1007/BF02310555.
- [27] M. Schrepp and J. Thomaschewski, "Handbook for the modular extension of the User Experience Questionnaire All you need to know to apply the UEQ+ to create your own UX questionnaire," in: MUC'20, 2019, doi: 10.13140/RG.2.2.15485.20966.
- [28] M. Rohandi, "An user experience analysis of UNG e-learning using user experience questionnaire tool," in: Advances in Social Science, Education and Humanities Research, Apr. 2022 [Online]. Available:
- [29] M. Saunders, P. Lewis, A. Thornhill and A. Bristow, Research methods for business students. 8th edition, London, UK: Pearson Education Limited, 2019 [Online]. Available: https://www.researchgate.net/publication/330760964_Research_Meth ods_for_Business_Students_Chapter_4_Understanding_research_phil osophy_and_approaches_to_theory_development
- [30] E. Murphy, "Young sales professionals in lockdown: how the individual work performance changed from their own perspective," in: DBS, 2021 [Online]. Available: https://esource.dbs.ie/handle/10788/4307

تحسين تجربة الزائر الإعلامي في صناعة الترفيه السعودي: إطار عمل لتقييم وتحسين المنصات الرقمية

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المستخلص. فتماشياً مع رؤية المملكة ٢٠٣٠، تم إنشاء الهيئة العامة للترفيه (GEA) لتتولى تنظيم وتطوير قطاع الترفيه داخل المملكة. يتضمن جزء من هذا التطور تحقيق رضا الزوار بمختلف فئاتهم. نظرًا لأن الهيئة العامة للترفيه تركز على تحسين جودة الحياة، فقد حددت هدفًا يتمثل في تقديم جميع الأنشطة للزوار المحليين والدوليين.

استنادًا إلى هدف تعزيز تجربة الزائر، يسعى فريق العلاقات العامة في الهيئة إلى إدخال تحسينات على المركز الإعلامي الافتراضي. لذلك سعى هذا البحث إلى دراسة التحديات في تجربة الصحفيين في قطاع الترفيه ومعالجة كافة الاحتياجات التى تتطلبها العلاقات الإعلامية في هذه الرحلة.

تم إجراء الدراسة بالمنهج المختلط بعد تصميم تسلسلي توضيحي. أولاً، قمنا بنشر استبيان مكون من ٢٦ عنصر متعدد الخيارات للصحفيين والوكالات الإعلامية للحصول على رؤيتهم بشأن المركز الإعلامي الافتراضي باستخدام قناتي: البريد الإلكتروني و WhatsAppتم إعداد نسخة مخصصة من استبانة تجربة المستخدم لقياس ١١ مقياس من نموذج قابلية الاستخدام. تم تنفيذ هذه المرحلة لقياس تجربة عدد (ن = ١٠٤) من المستخدمين الصحفيين على المركز الإعلامي الافتراضي (VMC) ، ثم مناقشة نقاط التطوير مع فريق العلاقات العامة من خلال سلسلة من المقابلات شبه المنتظمة .تشير النتائج إلى أن المركز الإعلامي الافتراضي يُظهر مستوى عالٍ من الجودة والتكيف للمستخدمين. أظهرت النتائج أن سهولة الاستخدام هي أهم ميزة لمنصة المركز الإعلامي الافتراضي VMC. يجب أن تكون منصة المركز الاعلامي سهلة للغاية ومناسبة للاستخدام حتى تكون مركزًا للمعلومات ومرجعًا مستدامًا للصحفيين ووكلاء وسائل الإعلام. هذه المنصات لديها القدرة على استبدال وأتمتة جميع ممارسات المركز الإعلامي إذا تم الإعلان عنها مستمرار للسماح بالتحسين المستمر.

الكلمات المفتاحية عنجربة الزائر، صناعة الترفيه، المنصات الرقمية، المنهجية المختلطة، استبيان تجربة الزائر.