

## Studying the Requirements of the Digital Interactive and Transformational Model in the Virtual Space at the Islamic Republic of Iran Broadcasting Organization

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### Abstract

**Purpose:** The current research aims to develop a model for digital transformation within the virtual space of the Broadcasting Organization in accordance with increasing the functionality of the virtual space among the audiences. Due to the lack of a model in this field in order to benefit from it, this research aims to extract the components of the model using the thematic qualitative method or theme analysis.

**Method:** The statistical population includes 15 experts in media management and virtual space. To measure reliability, intra-subject agreement method (reliability between two coders/evaluators) was used to determine the reliability of the texts, and the reliability coefficient obtained for all three

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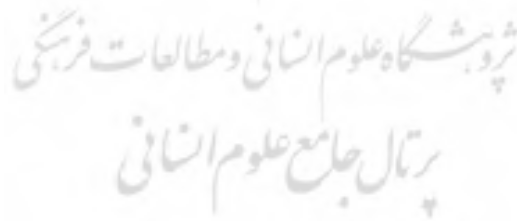
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interviews and the total reliability coefficient was (0.87), surpassing the minimum acceptable threshold of 0.7, confirming the reliability of the codings and the interviews.

**Findings:** The findings indicate that the model requirements consist of 6 main categories, 9 sub-categories, and 38 sub-categories essential for creating digital transformation and enhancing the interaction of the Islamic Republic of Iran's radio and television with the virtual space. The main categories of the model encompass content production, comprising six main components: content production (with six indicators), opportunities and threats (with 11 indicators), strengths and weaknesses (with 13 indicators), digital transformation components (with five indicators), platforms of introduction (with seven indicators), and consequences of digital transformation (with four indicators), totaling 46 indicators.

**Conclusion:** The results show that establishing a favorable interaction in the virtual space and new media by creating a digital transformation in the national media is effective in attracting the audience and improving the performance of the national media and ensuring the satisfaction of the stakeholders.

**Keywords:** Broadcasting Organization of the Islamic Republic of Iran; Digital Transformation; Interactive Model; National Media; Virtual Space.



## **Introduction**

Due to the expansion of the Internet as a tool to enter the world of virtual space and the lack of temporal and spatial restrictions in this zone, many relationships, social institutions, and even international affairs have been influenced by it. With the expansion of the Internet and its domain, virtual space, many variables such as communication, public opinion, etc. have changed in both the West and third world countries. In this context, the technological infrastructure has had a significant impact on the advanced services of this space and has led to digital transformation. Issues such as the influence and effects of virtual space and its consequences in revolutions and social and democratic movements in the region have been among the effects of virtual space in recent decades. This influence has been so significant that it can be boldly said that this technological phenomenon has now permeated all human relations and civil and social activities. On the other hand, based on numerous researches, virtual space through messenger software such as Instagram, Telegram, WhatsApp, etc., as alternative media, willy-nilly affects people's way of life in matters such as clothing, makeup, speech, actions, beliefs, and way of thinking, and has consequences such as a feeling of inferiority, privations, and a decrease in the number of audiences.

These effects are such that a person feels deprived and fed up with life as a result of connecting with virtual space and defining ideal life standards within it, as well as by comparing themselves to what they see on TV (Hasani et al., 2022). Despite the significant influence of virtual space on people's daily lives, national media, as the sole entity authorized to broadcast radio and television in the country, has not been able to play an effective role in this domain. Although Sed and Sima have historically played crucial roles in various political, social, and cultural spheres, contributing to the strengthening of cultural cohesion, national identity, and countering destructive influences, they have not adapted effectively to the changes brought about by virtual space. Therefore, given the active presence of virtual space in both domestic and international arenas, it is imperative for radio and television to acknowledge the competition with other media and align their strategies in the virtual space with the evolving landscape of digital media worldwide (Rastegar et al., 2022).

The Radio and Television of the Islamic Republic of Iran, being the exclusive broadcaster of radio and television in Iran, has historically played a vital role in various political, social, and cultural domains, contributing to cultural consistency, national identity reinforcement, and

mitigating destructive influences. However, with the advancement of emerging technologies, these media outlets have struggled to establish meaningful interactions with the Internet and virtual space. In order to remain competitive in this evolving landscape, Sed and Sima must understand their direction in the virtual space based on the changing dynamics of digital media globally. In addition to offering entertainment, Iran's radio and television networks are also responsible for providing news. With over 20 national channels, the Khabar channel is dedicated to broadcasting news round the clock, while other channels provide news during various breaks. Despite the widespread availability of radio and television networks across Iran, it was expected that they would excel in news broadcasting compared to other media. However, in practice, not only has this expectation not been met, but also with technological advancements, radio and television seem to struggle to keep pace with the virtual space.

New technologies may be expensive, but their most important difference lies in their accessibility at any time; That is, the audience can follow the news when they want, not like radio and television, which broadcast news at specific hours. This aspect is so important that it has not only affected the information network but also had an effect on entertainment such as watching feature films. This is the necessity of moving from the traditional organizational models to dynamic and effective models, a prescription that is always prescribed by theorists and owners of managerial ideas. Today, the need for digital transformation and digital transformation management has been acknowledged by many organizations and how to achieve it has become a fundamental challenge (Hasani Ahangar et al., 2022).

There are two important dimensions of virtual space: content and hardware, and there are many opportunities and threats in both dimensions, especially in the content dimension. Considering this emerging phenomenon and its tremendous impact on the dimensions and levels of human life in the new era, the damages caused by it are also expanding, and its opportunities have been overlooked due to lack of attention. In the country, despite the formation of the Supreme Council of Cyberspace, the decisions of this council have not been effectively implemented by the relevant bodies. The production of content based on the Islamic-Iranian worldview and in accordance with the Imam of the community, without continuous monitoring of it, is a serious vacuum that is strongly felt in the governance of this space in our country today. In the current situation, the

virtual space in the country does not have a fixed and single guardian. The Ministry of Communications and its subordinate organizations, including the Organization for the Regulation of Radio Communications, Organization for the Regulation of Universal Audio and Video in Virtual Space (SATRA), and the Criminal Case Working Group that follows the discussion of filtering, are among the institutions involved in this matter. This issue was mentioned in the statements of the Supreme Leader on the 3rd of February 2016, emphasizing the need to strengthen content production: "In the field of content production, we cannot be sure of accidents and what will happen; you should sit down and plan on this issue - content production" (Rastegar et al., 2022).

Therefore, the national media, by actively using the capabilities of virtual space, especially after the possibilities created by virtual social networks, should monitor the views and opinions of viewers about their programs and implement their opinions, and engage in serious and dynamic interaction with the audience in virtual space. Creating content to present in this space, finding techniques to maintain contact with the audience and get their feedback in social networks, as well as training journalists to be in such networks, are essential and very vital requirements for the national media. Digital transformation in broadcasting requires the design of an interactive model taking into account the latest media technologies. Therefore, in the present research, with the aim of studying the requirements of the interactive model of the Islamic Republic of Iran Broadcasting (IRIB) Organization in the virtual space, we are trying to answer the following question: what are the requirements to provide a suitable interactive model in cyberspace for the purpose of digital transformation in the functioning of the Islamic Republic of Iran Broadcasting and Broadcasting?

### **Literature Review**

In the review of research literature, the first principle is to find the theoretical foundations and backgrounds related to the research topic. This requires special accuracy and extreme care in searching and citing scientific and research articles. To access the research background, international indexes and databases such as Google Scholar, Emerald, Science Direct, Elsevier, Springer, ProQuest, etc.; Also, national databases such as Noormags, Magiran, ensani.ir, IRANDOC, OPAC of National Library and Archives of Iran, and etc. were searched. The search results showed that few studies have been done on the topic of the current research

and there is an obvious research gap in the field of studying the requirements of the interactive model of the Islamic Republic of Iran Broadcasting Organization in the virtual space of the country. Some related researches are mentioned below:

Nasrollahi and Mohammadi (2021) in their research entitled "New Media Policymaking in Iran: (Case Study of Broadcasting Organization and National Center of Virtual Space)" which was conducted with SWAT analytical matrix method, concluded that the weaknesses of the national media in the policy-making of using new information media is more than its strong points and the threats facing this media outweigh its opportunities. On the other hand, the merits of the National Center for Cyberspace in policy-making for the use of new information media are more than its weaknesses, and the opportunities facing this center outweigh its threats.

Bagherpoor et al. (2021) in their research entitled "Methods of convergence between radio and television in the field of content production" which was conducted with the grounded theory method, concluded that the effective categories in the convergence of radio and television and content production in the virtual space include media literacy education of the audience, changing the functions of the media, interacting with the audience, changing strategies, changing policies through media decoration, creating a common discourse, and hiring an expert panel.

Tashakkori et al. (2021) in their research entitled "The role and location of new communication technologies in making radio-television production processes more agile" which was conducted with a survey method, concluded that new communication technologies are an effective tool to increase the speed of production operations. The flexibility of the production model and system, high quality and increase in custom production, and the integration and low complexity of the production processes in the pre-, during, and post-production stages are essential for the realization of media excellence and directly affect the agility of the production processes in radio and television.

Pakdel et al. (2019) in their research entitled "Explaining the Challenges of Broadcasting Organizations in Virtual Space" which was conducted with a qualitative and Delphi approach, came to the conclusion that with the emergence of social networks, traditional media and media organizations are faced with new threats and opportunities. Two categories of challenges related to the current and future situation were counted and

a specific solution was presented for each category. Finally, aggressive strategies were introduced as the most appropriate strategy for the organization.

Afkhami and Hesampour (2019) in their research entitled "Challenges of television in facing the evolution of digital technologies" which was conducted with the method of document research, semi-structured interviews and thematic analysis, concluded that television in Iran's media ecosystem is still of influence. It has a great impact on the general public of the country and has a deep connection with the concept of national unity and security. Digital transformation and digital technologies used in other countries are not applicable in Iran and local factors and current conditions of the country should be taken into consideration.

Safiullah et al. (2022) in their research entitled "The Impact of Social Media and News Media on Political Marketing: An Empirical Study of the 2014 Indian General Election" which was conducted with the regression analysis technique concluded that there is a relationship between Twitter and the vote share of political parties, but it is not significant. Whereas, Prime News has a strong and significant relationship with the increase in votes and shows a higher predictive power than Twitter.

According to the results of Sirowiak`s research entitled "The role of social media in the war between Russia and Ukraine", the effectiveness of social media even surpasses some traditional war methods. With the prominent role of social media in modern warfare, its use has become increasingly widespread and has gradually become a force multiplier in modern warfare.

Chen et al. (2022) in their research entitled "The role of social networks in public opinion", came to the conclusion that the control of public opinion and audience control has become the cognitive domain of virtual space. Emerging network media, such as social networks and mobile communication networks, have played an important organizational and planning role in a series of important events, and in this regard, all countries continue to support researches into fundamental cognitive theories about social networks.

Laka et al. (2021) in their research entitled "Can digital technologies improve students' performance?", which was carried out with a combined method (qualitative and quantitative), investigated the role of the virtual learning environment and the use of social media in education. They concluded that virtual learning can increase the achievement of students' educational goals.

Vardarlier and Ozsahin (2021) in their research entitled "Digital Transformation in Human Resource Management: The Impact of Social Media Performance" examined social media tools used in human resource management processes and the impact of using social media in human resource management processes. It was done on the performance of human resources management and the overall performance of the company. The results showed that human resource managers frequently use social media tools for recruitment and employee branding processes, and most prefer these media in all human resource management processes.

Kalogeropoulos et al. (2021) in their research entitled "The level of trust and confidence of Greek people in the news of news media and social media", concluded that in Greece, social media are trusted more than news media. The thematic analysis of the survey responses showed that Greek respondents have adopted alternative news sources (social media, born digital media) in unprecedented numbers due to their distrust of traditional news media.

Park et al. (2021) in their research entitled "Learning about politics from mass media and social media: The moderating role of press freedom and public service broadcasting in 11 countries" concluded that the use of news through television, newspapers, online news sites and social media are positively related to political knowledge. In addition, press freedom and strong public broadcasting strengthen the relationship between news consumption (via mass and social media) and political knowledge.

Khrushch et al. (2021) in their article entitled "The virtual space of the library in the conditions of digital transformation" analyzed the development process of information in terms of digital transformation, defining the functions and communicative nature of libraries in the modern world, and changing the paradigm of information education and library professionals. The results showed that virtual space is rapidly developing in libraries and provides unhindered access to information and services, effective feedback from readers, and the opportunity for their participation in creating relevant and popular content. This creates conditions for expanding the range of information and socio-cultural services, making libraries accessible to consumers and. New educational programs i.e. "Management of social and communication networks, Internet marketing" and "Management of web projects, digital content design" were introduced as solutions.

Hosseini et al. (2021) in their research entitled "Individual motivation and the effect of social media on knowledge sharing and students' learning



performance: evidence from an emerging economy" which was done with the method of covariance-based structural equation modeling (CB SEM) ) based on survey data concluded that social media functions (document exchange, virtual communication, and knowledge formation) and individual motivation (reputation) are the main factors that HEIs can use to encourage knowledge sharing and improve learning performance among students.

The review of the research done into the media indicates that the expansion and influence of new technologies has increased the focus on the proposed theories and their application regarding social media and virtual space. In this way, the people of the world go to social networks and cyberspace to get the necessary information and news, and due to the quick and easy access to the information that is produced in these types of networks, they have gradually gained high popularity. Accordingly, in order to attract and recover its audience and produce content that can reach its audience quickly and easily, the national media must systematically provide the necessary platform for active presence in the virtual space by establishing an appropriate technological infrastructure.

### Method

The purpose of the current research in to design and explain the optimal interactive model for the activities of the broadcasting organization in the virtual space using the qualitative research method of thematic analysis. The statistical population comprised 15 experts, including 3 university faculty members in media management fields, 9 executive directors of the Broadcasting Organization, and 3 experienced experts in media management. When selecting expert panel members, their expertise in media management and familiarity with the topics of media management and virtual space were considered. The features and characteristics of the participants in the current research are shown in Table 1.

**Table 1. Features and characteristics of participants in the research**

Interviewee	Education	Number
University faculty member	PhD	3
Experienced experts and consultants in the field of media	PhD	3
Executive directors of the broadcasting organization with ten years of service and more	PhD	7
	Masters	2
Total		15

Sampling in the current research was conducted in a non-probability, judgmental and purposeful manner and continued until reaching a consensus. Data was collected using semi-structured interview tool and analyzed through theme analysis. Theme analysis is a method to determine, analyze and express the patterns (themes) within the data. At a minimum, this method organizes and describes the data in detail. But it can go beyond this and interpret different aspects of the research topic. The process of theme analysis in the current research started when the researcher considered patterns of meaning and topics that have potential appeal. This analysis included a continuous back-and-forth between data sets and coded summaries, and at last the data analysis was finalized.

In the present study, the reliability was measured using the intra-subject agreement method (reliability between two coders/evaluators) to assess the reliability of the texts. For this purpose, a university lecturer who was knowledgeable about the subject of the research was requested to participate in this research as a research associate (coder). Subsequently, the researchers and the research colleague coded three texts together and calculated the percentage of agreement within the subject, serving as the reliability index of the research, utilizing the following formula.

$$\text{coefficient reliability} = \frac{2 \times \text{No of agreements}}{\text{Total Number of cods}} \times 100$$

The reliability results are shown in Table 2:

**Table 2. Calculation of reliability between two coders**

Row	Interview code	Total number of codes	Number of agreements	Number of disagreements	Test-retest reliability (percentage)
1	A 3	37	16	5	0.86
2	A 8	43	18	7	0.83
3	A 12	28	12	4	0.85
Total		105	46	16	0.87

The findings of Table 2. show that the reliability coefficient obtained for all three interviews and the total reliability coefficient (0.87) is greater than the minimum acceptable value (0.7), so it can be concluded that the

reliability of the codings is confirmed and the interviews are reliable, and suitable.

### Findings

In the current research, the findings were analyzed based on the theme analysis approach. Initially, the data obtained from the interview texts was transcribed and typed, and a number assigned to each of the documents. Based on the theme analysis method, documents were repeatedly reviewed and basic themes were extracted. In the next step, the themes were named according to their semantic relationship with the theoretical foundations of the research, and the organizing themes were formed, and finally, based on the identified organizing themes, the overarching themes were determined. Data coding was done according to documents and related numbers. After the completion of the coding stage, the researcher assigned a label for each of the codes and then put together the sub-themes that had the most semantic and conceptual affinity to each other and created new meanings and words. In fact, sub-themes were grouped into main themes. The main themes are the answers to the research questions that are extracted from the data. A summary of participants' responses and key points and extracted sub-categories is presented in Table 3.:

**Table 3. The subcategories of the research model**

Row	Subcategories	Source	Row	Subcategories	Source
1	Content production takes place in all the deputy offices of the Broadcasting Organization.	T2 - T3 - T5 - T9 - T15	2	The General Department of Plans and Programs is responsible for policy making and prioritization of content production in all deputy departments	T6 - T9 - T 10 T12- T13 - T14
3	Content production in social media is based on the needs of users' behavioral patterns.	T1 - T2 - T3 - T4 - T5 - T6 - T 10 - -T15	4	Content production in social media is often done by the users themselves	T4 - T5 - T6 - T 10 - T12- T13 - T15
5	Content production in social media is not supervised by a	T1 - T2 T4 - T9 - T 10 - T14 -T15	6	The penetration rate of social media is high.	T1 - T2 - T3 - T9 - T 10 - T11 - T12-

	specific regulatory authority.				T13 - T14 - T15
7	Users' hours of use and their amount of use are increasing (length of day and night).	T1 - T4 - T8 - T 10 T11 - T13 -	8	Media planners and managers manage public opinion in social media.	T2 - T3 T5 - T6 - T 7 - T 10 - T11 - T14 - T15
9	Neglecting new communication technologies to communicate with the audience is a national media threat.	T4 - T5 - T7 - T8 - T9 - T12- T13 - T14	10	Determining the axes of content production in the national media is based on the priorities of the broadcasting organization, governance and politics, not the needs and wishes of the audience.	T3 - T4 - T5 - T6 - T 7 - - T9 - T12- T13
11	The lack of favor of domestic messengers and government social media for the activity of the national media in social media in contrast to the unrestricted activity of messengers in foreign and private social media in terms of audience.	T5 - T6 - T 7 - T 10 - T11 - T12T15	12	The non-responsiveness of the broadcasting organization to the audience in the field of content production and publishing is a threat to the broadcasting organization	T1 - T2 - T6 - T 7 T9 - T 10 - T11 - T14 - T15
13	The existence of a rich content archive of the national media since its establishment has been a positive point of the national media for	T1 - T2 - T5 - T6 - T7 - T8 - T14 - T15	14	The existence of facilities and technical equipment and infrastructure in the field of content production and publishing is a strong point of the national media	T2 - T3 -T11 - T12- T13 - T14 - T15

	social media activities.				
15	The use of skilled and experienced human resources in the field of content production is a positive point of the national media.	T1 - T2 T5 - T6 - T13 - T14 - T15	16	Using the capacities of partner organizations inside and outside the country	T1 - T6 - T7 - T8 - T9 - T 10 - T11
17	Failure to adapt to different conditions, lack of agility in the national media management system is a weakness for social media activity.	T1 - T2 T5 - T6 - T7 - T10 - T11 - T14 -T15	18	The mismatch between the skills of the human resources employed in the national media and the skilled manpower for working in social media	T1 - T3 - T6 - T7 - T8 - T11 - T12- T13 -
19	Improper selection of human resources and development of human resources suitable for working in social media	T1 - T2 T5 - T6 - T7 T12- T13 - T14 - T15	20	The disagreement between the work processes in the radio and television organization and the work activities in social media	T1 - T2 T4 - T5 - T6 - T7 - T8 T11 - T12-
21	Resisting to adopt new technologies	T1 - T2 T5 - T6 - T7 - T10 - T11 - T13 - T15	22	Rich archive but old (sd) and converted to (hd) content with low quality and unplayable	T1 - T3- T4 - T6 - T 7- T8 - T9 - T 10 - T12- T13
23	Hard and inflexible organizational culture of national media as contrasted to audience culture and diversity of social media	T5 - T6 - T7 - T8	24	Hard access to the information of archive and content produced by the national media	T1 - T2 - T5 - T6 T8 T11 - T12- - T15
25	No implementation of freedom of	T1 - T2 T5 - T6 - - T10 -	26	Re-engineering national media	T3 - T4- T5 - T6 - T

	information policy according to the needs of social media by the Broadcasting Organization	T11 - T13 - T14 -T15		business processes for social media activity	7 - T8 - T11 - T12- T13
27	Redefining the distribution and content production processes in the national media based on the needs of the audience for social media activities	T1 - T3 T5 - T6 -T 10 - T11 - T12- - T15	28	Correct policy and planning regarding the new axes of activity in social media (social media marketing - content marketing and content production in social media)	T1 - T5 - T 7 - T8 - T9 - - T12- T13
29	Monitoring and analyzing the competitors' points of view in the field of content production and publication in the national media and examining the methods of applying changes to produce content and publish it in social media.	T1 - T2 - T5 - T6 - T10 - T14 -T15	30	Users' use of social media and content produced and published by the national media in the context of social media	T1 - T2 - T3 -T6 - T 7 - T8 - T9 - T 10 - T11 -T13 -
31	Increasing the influence of the national media on the user	T1 - T4 - T7 - T8 - T9 - T 10 - T13	32	Increasing users' trust in the national media	T1 - T2 - T4 - T5 -T11 - T12- T13 -
33	Identifying the popular skills of national media in social contexts	T1 - T2 - T3 T5 - T9 - T 10 - T11 - T13 - T14	34	News portals	T3 - T4 - T5 - T6 - T8 - T11 - T12- T13 - T15
35	Video sharing platforms	T3 - T4 - T5 - T 7 - T8 - T9	36	Television	T1 - T6 - T 7 - T8 - T12-

		- T13 - T14			T13 - T14 - T15
37	Messenger Soroush	T1 - T2 T5 - T6 - T8 - T9 - T11 - T12- T13	38	IPTV	T1 - T6 - T7 - T8 - T9 - T 10 - T11 - T13 - T14 - T15
39	Ott	T1 - T2 - T3 -T5 - T7 - T9 - T 10 - T12- T13 -	40	Creating a single brand for the national media to work and operate under its banner in social media.	T3 - T4 - T6 - T7 - T9 T11 - T12 - T14

In the next step, the extracted sub-categories were combined. For this purpose, the researcher has gathered together the sub-themes that have the most semantic and conceptual affinity to each other and created new meanings and words. In fact, the researcher has categorized the following items in the form of subcategories. The final results are presented in Table 4. In this way, 9 subcategories have been formed by combining 38 extracted subcategories.

**Table 4. The main categories of the model**

Subcategories	Subcategories
Content production is carried out by all the sub-departments of the Broadcasting Organization, the General Directorate of Plans and Programs is responsible for the policy and prioritization of content production in all the sub-departments.	Content production in the national media
Content production in social media is based on the needs of users' behavioral patterns, content production in social media is often done by users themselves, content production in social media is not supervised by a specific regulatory authority.	Content production in social media
The penetration rate of social media is high, the hours spent by users and their amount of use are increasing (day and night), planners and media managers manage public opinion in social media.	National media opportunities for social media activity

<p>Neglecting new communication technologies to communicate with the audience is a threat to the national media, determining the axes of content production in the national media is based on the priorities of the Broadcasting Organization, governance and politics, not the needs and wishes of the audience, the lack of favor of internal messengers and government social media for national media activity in social media as contrasted to the unrestricted activity of messengers in foreign and private social media in terms of the audience, the non-responsiveness of the broadcasting organization as contrasted to the audience in the field of content production and publication is a threat to the broadcasting organization.</p>	<p>National media threats to social media activity</p>
<p>The existence of a rich content archive of the national media since its establishment is a positive point of the national media for social media activities, the existence of technical facilities and infrastructure in the field of content production and publishing is a strength of the national media, the use of skilled and specialized human resources in the field of content production is a positive point of national media, using the capacities of partner organizations inside and outside the country.</p>	<p>Strengths of national media for social media activity</p>
<p>Failure to adapt to different conditions, lack of agility in the national media management system is a weakness for working in social media, mismatch of the skills of human resources employed in the national media with skilled manpower to work in social media, incorrect selection of human resources and development of appropriate human resources. By working in social media, the incompatibility of work processes in the broadcasting organization with the activities of work in social media, resistance to accepting new technologies, rich but old archive (sd) and converted to content (hd) and with low quality and unbroadcast, the hard and inflexible organizational culture of the national media as contrasted to the culture of the audience and the diversity of the social media, difficult access to the information of archive and content produced by the national media, the non-implementation of the freedom of information policy according to the needs of the social media by the Broadcasting Organization.</p>	<p>Weaknesses of national media for social media activity</p>



Reengineering the business processes of the national media for social media activities, redefining the distribution and content production processes in the national media based on the needs of the audience for social media activities, correct policy and planning regarding the new axes of social media activities (social media marketing - marketing content and content production in social media), monitoring and analyzing competitors' points of view in the field of content production and publication in the national media and examining the methods of applying changes for content production and publication in social media	Digital transformation of the National Media Organization
Users' use of social media and content produced and published by the national media in the social media platform, increasing the penetration rate of the national media on the user, increasing the trust of the users in the national media, identifying the popular competencies of the national media in the social platforms.	Consequences of digital transformation of national media for activity in social media
News portals, video sharing platforms, TV, Soroush Messenger, IPTV, OTT and creating a single brand for the national media to work and operate under its banner in social media.	Introduction platforms of national media in social media

The above table shows the main themes of the research model, and the main categories of the model can be formed from the combination of these sub-categories. Accordingly, the extracted pattern includes 6 main categories, 9 sub-categories (organizing topics) and 38 sub-categories (basic themes), which are shown in Table 5.

**Table 5. Overarching, organizing and basic themes**

Main article (Overarching topics)	Subcategories (organizing topics)	subcategory (basic themes)
Content production	Content production in radio and television	Content production takes place in all the deputy offices of the Broadcasting Organization.
		The General Department of Plans and Programs is responsible for policy making and prioritization of content production in all deputy departments.

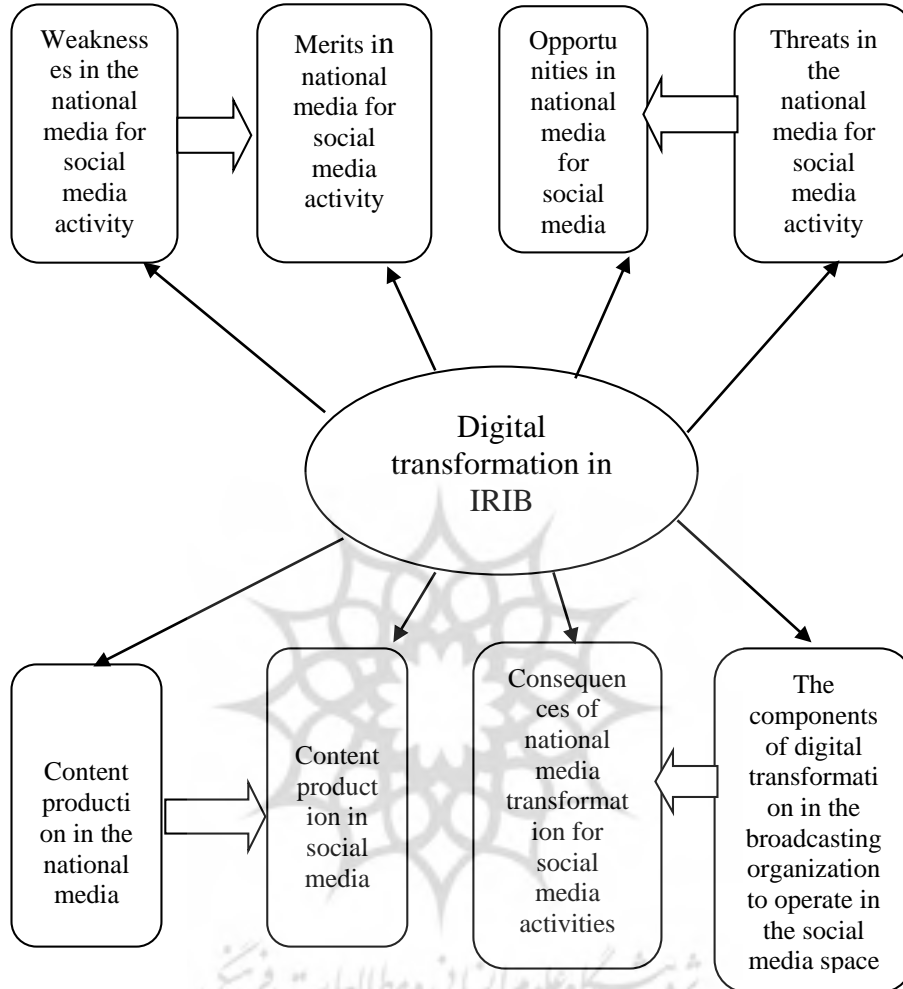
	Content production in social media	Content production in social media is based on the needs of users' behavioral patterns.
		Content production in social media is often done by the users themselves
		Content production in social media is not supervised by a specific regulatory authority.
Opportunities and threats	Opportunities	The penetration rate of social media is high.
		Users' hours of use and their amount of use are increasing (length of day and night).
		Media planners and managers manage public opinion in social media.
	Threats	Ignoring new communication technologies to communicate with the audience is a threat to radio and television.
		Determining the axes of content production in radio and television is based on the priorities of this organization, governance and politics, not the needs and wishes of the audience.
		The lack of favor of domestic messengers and government social media for radio and television activity in social media in contrast to the unrestricted activity of messengers in foreign and private social media in terms of audience.
		The non-responsiveness of the broadcasting organization to the audience in the field of content production and publishing is a threat to the broadcasting organization
Strong points or merits		The use of skilled and experienced human resources in the field of content production is a positive point of radio and television.
		Using the capacities of partner organizations inside and outside the country
		The use of skilled and experienced human resources in the field of content

Merits and weaknesses		production is a positive point of radio and television.
		Using the capacities of partner organizations inside and outside the country
	Weaknesses	Failure to adapt to different conditions, lack of agility in the broadcasting management system is a weakness for social media activity.
		Incompatibility of the skills of human resources working in radio and television with the skilled manpower to work in social media
		Improper selection of human resources and development of human resources suitable for working in social media
		The disagreement between the work processes in the radio and television organization and the work activities in social media
		Resistance to the adoption of new technologies
		Rich archive but old (sd) and converted to (hd) content with low quality and unplayable
		Hard and inflexible organizational culture of radio and television as contrasted to audience culture and diversity of social media
		Hard access to the archive of information and production content of radio and television
Non-implementation of freedom of information policy according to the needs of social media by the Broadcasting Organization		
Digital transformation of the broadcasting organization to operate in the social media space	Re-engineering broadcasting business processes for social media engagement	
	Redefining the processes of distribution and content production in radio and television based on the needs of the audience for social media activities	

Components of digital transformation		Correct policy and planning regarding the new axes of activity in social media (social media marketing - content marketing and content production in social media)
		Monitoring and analyzing competitors' points of view in the field of content production and publishing in radio and television and examining the methods of applying changes to produce content and publish it in social media.
	Consequences of the digital transformation of radio and television	Users' use of social media and content produced and published by radio and television in the context of social media
		Increasing the penetration rate of radio and television on the user
		Increasing users' trust in radio and television
		Identifying the public competencies of radio and television in social contexts
	Background	Radio and television introduction platforms in social networks
Video sharing platforms		
Television		
Messenger Soroush		
IPTV		
OTT		
Creating a single brand for radio and television to work and operate under its banner in social media.		

### Providing the final model for digital transformation

According to the results obtained from the qualitative and quantitative phase of the research, the final model for digital transformation in the national media can be presented in line with Algwar's shift towards social media. In this model, categories and factors extracted from interviews and structural equations for digital transformation in national media are presented in Figure 1.:



**Figure 1. Final model of digital transformation in IRIB**

Based on the resulting themes and concepts, the following model was designed for this interaction under the title of digital transformation in radio and television. This model has six main components including: content production (with six indicators), opportunities and threats (with 11 indicators), merits and weaknesses (with 13 indicators), digital transformation components (with five indicators), introduction platforms (with seven indicators) and the consequences of digital transformation (with four indicators), so by and large, it includes 46 indicators. The components of digital transformation in the field of the virtual space of

broadcasting can be introduced as follows: re-engineering the business processes of broadcasting to operate in social media, redefining the processes of distribution and content production based on the needs of the audience to operate in social media. , policy making and correct planning regarding the new axes of activity in social media, monitoring and analyzing the points of view of competitors in the field of content production and distribution in radio and television and examining the methods of applying changes for content production and its distribution in social media. This digital transformation can have consequences such as users use of social media and content produced and published by radio and television in the context of social media, increasing the penetration rate of radio and television on the user, increasing the trust of users, identifying the popular skills of radio and television.

### **Conclusion**

According to the results and analysis, there are differences between content production for virtual media and content production in radio and television. Among these differences is the adherence of radio and television to the administrative and hierarchical structure in content production, unlike other social media. In social media, this is decentralized and content production is done based on the needs and behavioral patterns of users and often by the users themselves. In addition, there is no special supervision of the content production in social media. Another point is education and skills. Production in radio and television requires skills and training, while in social media, production is done only by renewing existing skills or without the need for special skills. This issue causes the response between content producers and users to take longer than social networks. An important point in producing content for radio and television is the production quality component. The produced content must have gone through the process of knowing the audience in such a way that it is now bound to gratify and influence the audiences properly, and it must always be accompanied by motivations such as entertainment, awareness, and the creation of knowledge.

In addition, this content production should be based on the general policy of the system, while there is no such requirement in networks and social media except for compliance with the current laws of the country. Considering all of these factors and the results of thematic analysis, it can be argued that radio and television have the opportunity to operate in the virtual space. The virtual space offers an ideal environment for business

growth and expansion, as well as income generation and marketing opportunities. Radio and television can engage in marketing activities in this space by presenting advertisement reports, while social media planners and media managers can shape public opinion. Also, its capabilities can be applied to introduce the productions of the Broadcasting Organization. There are also some threats to the activities in this space, including a two-way and interactive communication in the virtual space and social networks. Meanwhile, neglecting new communication technologies to communicate with the audience is known as a serious threat to radio and television. In addition, radio and television does not consider the wishes of the audience in the production of content and provides content based on its own priorities, governance and politics.

On the other hand, radio and television have merits and weaknesses to enter this field. The existence of a rich archive of radio and television content, the existence of facilities and technical equipment and infrastructure in the field of content production and publishing, the use of skilled and experienced human resources in the field of content production, and the use of the capacities of partner organizations inside and outside the country, are other important aspects. On the other hand, lack of adaptation to different conditions, lack of agility in the management system, incompatibility of the skills of human resources employed in broadcasting with skilled manpower for working in social media, improper selection of human resources and development of human resources suitable for work in social media, incompatibility of work processes in the broadcasting organization with work activities in the social media, resistance to accepting new technologies, hard and inflexible organizational culture of radio and television as contrasted to audience culture and diversity of social media, difficult access to information archive and content produced by this media, non-implementation of freedom of information policy according to the needs of social media by radio and television organization, are the disadvantages.

One of the weaknesses of this organization is entering the field of social networks. Based on the obtained results, the main component of the model includes content production, opportunities and threats, merits and weaknesses, transformation components, introduction platforms and transformation consequences. Based on the research results of Nasrollahi and Mohammadi (2021), it was shown that the weaknesses of the national media in new media policymaking are more than its merits, and the merits of the National Space Center in the policymaking of these media are more

than its weaknesses. Also, Bagherpoor et al. (2021) in their research found that changing media functions, interacting with the audience, changing strategies, changing policies through media arrangement, creating a common discourse and having an expert panel are among the solutions for convergence in broadcasting.

Pakdel et al. (2019) also came to the conclusion that offensive strategies are the most appropriate strategies for virtual assistants in the field of virtual space. According to the findings of their research, Afkhami and hesampour (2019) consider the local factors and the current conditions of the country to be appropriate in the challenges of television with technological developments. Also, Hakimara (2019) acknowledged in their research that there is a need for reform and transformation in theoretical fields, especially highlighting theory. Pakdel (2019) also came to the conclusion in his research that radio and television should act by changing the pattern of content production and broadcasting in virtual space for more audience satisfaction and finding a better role and position of virtual space in competition with traditional media.

Bastani et al. (2019) found that in Iran's media system, activists of the political-economic system and people have gone to new media due to the malfunctioning of the mainstream media. Of course, these media have not been able to completely replace the mainstream media and a kind of displacement has occurred in the Iranian media network. Finally, Tashakkori et al. (2021) found that new communication technologies are an efficient tool to increase the speed of production operations, the flexibility of the production model and system, high quality and increased custom production, and the integration and low complexity of the production processes in the previous stage. during and after production. Also, according to the results of the research by Sharifi et al. (2018) technological changes have changed not only communication infrastructures, but also media organizations, and these changes require a new management model in the field of information. Also, the research results of Rezaeian and Bayati (2017) showed that with the emergence of new social media, in less than two decades, the media consumption culture and rituals have changed and mainstream media such as radio and television have lost part of their audience. Therefore, according to the role and position of the Islamic Republic of Iran Radio and Television in informing, managing public opinion and raising awareness, for maintaining the audience and strengthening their position, there should be a scenario in this regard.



As a result of Rabbani and Mohammadimehr research (2016), technologies such as hybrid television, social television, mobile interactive television, and the fifth generation of mobile communications were identified as technologies with high feasibility and priority, which are based on the results of the current research on the use of new platforms for national media such as news portals, video sharing platforms, television, Soroush Messenger, IPTV and OTT and creating a single brand for the national media to work and operate under its banner in social media, and the components of the organizational transformation of radio and television based on the development of hardware and software technologies for social media activities are aligned. In the research of Salvatian Vabouzar Khosh Bayan (2017) "effort to increase the budget of the broadcasting center of the provinces" and "paying more attention to the wishes and desires of the audience within the framework of their expediency, through receiving feedback and more interaction with the audience" were identified as the three main and priority strategies of the national media. Also, in Dadgar's research (2013), the role of organizational structure, leadership, organizational culture and the use of information technology, the quality of human resources and having a research attitude towards customer preferences and how they interact with social media have been identified. Palvi (2003) believes that governments are now facing audiences with new needs that new media can meet, which is consistent with the merits and weaknesses identified in this research.

Finally, by emphasizing the establishment of favorable interaction in virtual space and new media, it can be said that unlike television, new media can play a direct role in the life plans of an individual. More participatory media are more suitable for making changes, because they provide richer information in addition to their flexibility. This is consistent with the more advanced process of change. Also, some new media are less dependent on infrastructure. For these reasons, radio and television need social networks to be effective so that they can maintain their audience and also increase their number. This will not be realized unless digital transformation in the national media in proportion to the increase of virtual space function will be developed, so that the performance of the national media can be enhanced and the satisfaction of its stakeholders will be ensured.

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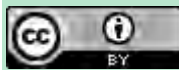
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