Electronic Applications' Role in Enhancing Awareness of Saudi Government Institutions' Activities in Accordance with Vision 2030 Comparative Analytical Study

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Abstract

This analytical comparative study aims to identify the role of Saudi government applications such as Absher, Tawakkalna, and Sehhaty in raising awareness about institutional activities according to Vision 2030. The importance of the study lies in adding new dimensions for employing electronic applications, and the need for a study that combines applications and digital public relations. It also sheds light on the styles and principles of applications. The study used descriptive-analytical and comparative methodology, analyzing 271 tweets from the mentioned government application accounts. The results showed that the most prominent topic was awareness-raising, while the most important goal was to provide services and facilities. Informational styles and logical appeals were also frequently used while focusing on the analytical framework. The study also clarified the role of these applications in supporting the activities of government institutions.

Keywords: *Saudi government, Applications, Institutional activities, Comparative methodology.*

Introduction

The contributions of digital transformation (National Transformation Program in the Health Sector 2020), whose strategies were drawn up by the Kingdom in expanding electronic services, improving them, and simplifying their procedures, in support of the kingdom's efforts in crisis management, the realistic participation of the virtual environment in achieving the desired goals and intensifying digital communication with beneficiaries and opening electronic channels to exchange information with them. This enhances the awareness-raising, educational act, and storing of the information of the citizens and residents digitally, to employ them through applications developed on the mobile phones: (Absher, Tawakkalna, Sehhaty (My Health)), which is known to all beneficiaries.

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Electronic applications have become an active partner in the work of organizations of all orientations, to indicate that they possess the competencies and cadres that enable them to possess applications. Also, electronic applications themselves have become a trade and investment. Companies, especially emerging companies, have become inclined to open electronic applications as an alternative to the website. Let us not forget that e-commerce has become completely dependent on electronic applications. Electronic applications are considered an inevitable circumstance imposed by the current economic conditions for the development of all sectors of society (Hassan Mohamed Abd, 2018). The Kingdom of Saudi Arabia has sought to expand communication channels between government bodies and citizens to ensure everyone's participation and their views are heard, and seeking to improve the quality of services provided by government bodies through online interaction ((Hassan Mohamed Abd, 2018), and by dedicating government applications to citizens and customizing them to meet their needs and achieve their aspirations towards the government system. Vision 2030 is still working on developing government applications through strategies that are still under study but will be released soon.

Based on this Increasing demand, it was necessary for us to shed light on this phenomenon the factors for its emergence, and what it provided to improve the government system and the pillars on which it rests. E-applications were born from e-government and are its predecessor in emergence. This digital transformation was derived from the lofty vision of Vision 2030 to develop community institutions, develop the services they provide, and reach the entire population of the Kingdom. Therefore, the study is an increase in knowledge in the field of media and administrative sciences, and it is also a means of discovering the obstacles to the progress of government electronic applications and then presenting our recommendations for developing them so that this research becomes an increase in knowledge for those interested and for future generations.

Previous studies:

Previous studies are one of the basic steps that contribute to building a knowledge base for the researcher and serve as the starting point and reference for his research. Recent previous studies include:

Ibrahim Al-Shehaib's study (2020) sought to introduce the reality of e-services applications in the Execution Court in Riyadh, and one of the most important results achieved by: Electronic services are widely applied in the Execution Court in Riyadh, although there are some obstacles when implementing electronic services in the Execution Court in Riyadh, but they are not many (Ibrahim Al-Shehaib, 2020).

A study by Hassan Al-Qarni and Abdul Rahman Al-Qarni (2018) emphasized the importance of electronic applications in building a knowledge society and presented a proposed model for it. Among the most important results it achieved: Electronic applications provide opportunities to obtain information from multiple sources. Electronic applications provide many opportunities to learn about everything new. Electronic applications also represent a modern alternative to traditional libraries, and electronic applications help exchange information between researchers around the world (Hassan and Abdul Rahman 2018).

A study by: Saad Al-Zoghaibi (2015): emphasized the importance of the electronic management applications' role in improving administrative decisions, and among the most important results reached by the study was the ease of obtaining important documents through electronic archiving applications, and confirmed that electronic management applications give better management decisions than traditional management, e-management applications have contributed to reducing the routine procedures used in managing all types of decisions (Saad Al-Zoghaibi (2015).

Comment on previous studies

It is clear from the fact of monitoring previous studies that the following:

➢ Most previous studies used questionnaire and interview as tools for collecting data.

➢ Most previous studies relied on the descriptive and analytical approach.

➢ Most studies agreed on the importance of government electronic services.

➢ Most studies have concluded that there must be a strong structure to establish effective e-government and the presence of human competencies capable of employing it.

➢ Previous studies differed from the current one in the subject of study, the study community, the sample, and the period, while they are similar in the approach and tools used.

Benefits from previous studies:

The advantages of previous studies are the following points:

● To form a sufficient result and theoretical background on the subject of the study by recognizing the importance of applying e-government and how electronic applications have become one of its tools.

● Identify the approach that serves the subject, which is the descriptive-analytical approach.

● Monitor the axes and topics that have not been addressed before, which we extracted by reading the recommendations of the studies and the results that came out of each study.

Study problem

Most institutions have turned to electronic applications as a tool for displaying and conducting services, which has increased their use by the public, hence the idea of the study came to know the role of electronic applications in highlighting the activities of government institutions by analyzing a number of tweets from government application accounts (Absher – Tawakkalna – Sehhaty) on Twitter – (X), as well as measuring the extent of public exposure to government electronic applications and the problems they face while using them by publishing a questionnaire on social media sites.

Study importance:

 The importance of the study is represented by several main points:

1.   Discovering new dimensions for employing electronic applications.

2.   The study explains the different methods and principles on which electronic applications are based.

3.   The study monitors the rates of individuals' use of government applications and the problems they face.

4.   The study opens horizons for interdisciplinary research between media, management, and digital technology.

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Objectives of the analytical study:

Achieving the main objective of identifying the role of electronic applications in highlighting the activities of government institutions, and from it emerge several other objectives, which are:

1.   Identify the nature of the topics raised in the tweets of government application accounts on Twitter-(X).

2.   Disclose the communication strategies raised by government application accounts In their presentation of topics on Twitter – (X).

3.   Monitor the media frame raised on the government applications account on Twitter- (x).

4.   Monitor and analyze public comments regarding tweets raised on government application accounts through Twitter (X).

5.   Monitor the goals raised in tweets from government application accounts on Twitter - (X).

6.   Identify the languages of Twitter in government application accounts on Twitter - (X).

Questions of the Analytical Study

In its analytical aspect, the study seeks to answer a main question:

-       What role do electronic applications play in highlighting the activities of government institutions?

Several sub-questions branch out from this question:

1.   What are the topics raised in government application accounts on Twitter-(X)?

2.   What are the communication strategies raised in government application accounts on Twitter-(X)?

3.   What are the media frames raised in government application accounts on Twitter-(X)?

4.   How do respondents interact with tweets raised in government application accounts on Twitter-(X)?

5.   What are the goals of the tweets raised in government application accounts on Twitter-(X)?

6.   What are the languages in which government application accounts are tweeted on Twitter-(X)?

Study type

According to the nature of the problem and its objectives, the study belongs to the field of descriptive-analytical studies, which are concerned with an accurate and detailed description of a specific phenomenon in a qualitative or quantitative digital manner through specific periods (Enaya Ghazi. 2014). It seeks to analyze the accounts of government applications (Absher – Tawakkalna – Sehhaty) on Twitter–(X) to identify the role that electronic applications play in highlighting the activities of the government institution, analyze the content of their tweets and understand the connotations they contain and the strategies through which they are applied.

Study methods

Within the framework of the research problem addressed by the study and its objectives, it relied on:

Media survey approach: The media survey approach is one of the most prominent scientific approaches used in the field of media research and studies. It is a scientific approach based on describing the media phenomenon in its current state. It was employed in this study by surveying the content of tweets from government application accounts

(Absher – Tawakkalna – Sehhaty) on the Twitter-(X) website to find out what is presented and how it serves the activities of government institutions.

Descriptive analytical approach: The descriptive analytical approach is based on studying the phenomenon by its nature after setting several questions and studying it by collecting information and quantitative data and then trying to find answers to these questions.

Comparative approach: This approach is based on comparison in studying the phenomenon in terms of similarities and differences. It was employed by conducting a comparative study on the content of the Tawakkalna account, the content of the Absher account, and the content of the Sehhaty account on Twitter-(X) to find similarities and differences between them.

Analytical study community

This study deals with tweets circulating in government application accounts (Absher – Tawakkalna – Sehhaty), the topics, and comments that were raised by research and analysis.

Sample of the analytical study

It is considered a true representation that can be circulated to the study community, and a purposive sample of tweets from government application accounts (Absher–Tawakkalna–Sehhaty) has been identified and selected on Twitter–(X). The number of tweets reached (271), with (154 tweets) for the Tawakkalna account, (77 tweets) for the Absher account, and (40 tweets) for the Ministry of Health (Sehhaty) account.

Reasons for choosing the sample

The reasons for choosing government application accounts (Absher - Tawakkalna - Sehhaty) on Twitter - (X) are due to several reasons:

–   Prominent importance of these applications in times of crises.

–   Novelty of applications and their connection with institutions' orientation towards e-government.

–   Permanent and continuous updating of these accounts.

–   Quick response to inquiries and interaction with audiences.

–   Multiple methods and strategies used.

–   Multiplicity and diversity of digital content published in the accounts.

Limits of the Analytical Study

Spatial limits: the spatial limits are limited within the framework of the Tawakkalna account of the Saudi Authority for Data and Artificial Intelligence "Sadaya" in the Kingdom of Saudi Arabia, the Absher account of the Ministry of Interior and the Ministry of Health (Sehhaty) account.

Time limits: Applied in the time period from 9-11-2021 ad to 16-9-2023 ad.

Objective limits: The role played by electronic applications to highlight the activities of government institutions on Twitter-(X), through the communication strategies that Digital Public Relations applies to tweets, their types, the goals behind them, the extent of their connection with users, and the queries they direct.

Data collection tools:

The study relied on several tools to collect data, namely:

Observation: the observation tool is one of the tools commonly used in all research and studies, it was employed by observing what was published through the Tawakkalna

account, the Absher account, and the Ministry of Health (Sehhaty) account on Twitter (X) in order to know the content and types of tweets.

Content analysis:

The data collection and analysis relied on the content analysis tool by monitoring a group of tweets on the Tawakkalna account, the Absher account, and the Ministry of Health (Sehhaty) account on Twitter (X). The content analysis tool is one of the basic tools in analytical studies, but it does not provide accurate results.

Defining the units of analysis:

These are the units of content that can be subjected to counting and measurement, and their presence, absence, or repetition indicates indications that benefit the researcher in interpreting quantitative results (Ammar Bouhouche, et al., 2019). The communication unit (the tweet), which represents the tweets published in the accounts of government applications (Absher – Tawakkalna – Sehhaty) on the Twitter website (X), was adopted as a unit of analysis and counting so that the tweets are read and classified according to the analysis categories. The analysis form is designed depending on specific categories, to ensure obtaining quantitative values that help provide accurate results.

Defining the categories of analysis

Categorization or formulating categories is considered one of the most important stages of content analysis (Tabah Muhammad, 2015). Indeed, success in achieving objective and correct results for studying content depends mainly on the extent of the researcher's ability to provide accurate categories to measure the required dimensions, and for this reason, the categories of topic analysis were classified according to the objectives of the study and measurable categories were determined to serve his study. The criteria for classifying the analysis categories were based on the conceptual framework of the research, its objectives, and questions, and it was also based on tweets published in the accounts of government applications (Absher-Tawakkalna- Sehhaty) on Twitter-(X). Procedural definitions for each category of content analysis were also developed to facilitate the process of understanding, measuring, controlling, and tightening the analysis process.

Categories of analysis are represented by:

Topics category: It is one of the important categories in the content analysis process, and it was used to identify the types of topics raised in the accounts of government applications (Absher-Tawakkalna-Sehhaty) on Twitter – (X):

– Humanitarian topics: related to the emotional side of society and affecting it.

– Economic topics: include topics related to money and savings, such as tweets about the announcement that the treatment is free.

– Social (national) topics: everything that concerns society and contributes to its development and works to strengthen patriotism within the entity of society and its belonging to the homeland.

– Health topics: related to the health of individuals and society, which are related to raising awareness and warning them.

– Awareness topics: What works to alert individuals about wrong behavior and correct their behavior?

Objectives category: These are the goals that the government application accounts (Absher – Tawakkalna – Sehhaty) seek to achieve through the topics raised in the tweets. The goals are divided into:

‒   Warning: It includes a warning against violating instructions and neglecting precautions.

‒   Awareness: All tweets related to community awareness in times of crisis.

‒   Providing services and facilities: These are tweets that aim to highlight the services of the Tawakkalna application, the services of the Absher application, or the services of the Sehhaty application and the facilities they provide.

‒   News: These are tweets that aim to inform about a specific topic of interest to society, such as tweets that tell about the number of cases during times of crises in Saudi Arabia.

‒   Advertisements: Related to all advertisements that government app accounts want to tweet about, such as tweets related to the courses offered by the app.

Category of communication methods: This means the communication methods used by government application accounts (Absher- Tawakkalna- Sehhaty) in the process of publishing tweets. It is divided into:

1.   Dialogue method: This means the method is based on involving the masses in the decision-making process.

2.   Persuasion method: The method is based on convincing the masses of the published topics through several tools, such as stimulating their emotional and human side so that they follow health instructions.

3.   Confirmation method: It means proving a certain Information or service and eliminating doubt about it.

4.   Media method: It is concerned with providing information and the latest updates related to the application to the masses.

5.   Consensus-building method: This means influencing the audience's behaviors and trends.

Persuasive Appeals category: There are many types of forms used in government application accounts (Absher-Tawakkalna-Sehhaty), but they can be limited to the following three categories:

-       Mental appeals: These are appeals that focus primarily on facts, evidence, and evidence to convince the audience mentally.

-       Emotional appeals: This type of appeal focuses on the emotions and psychological needs of the masses and thus influences them.

-       Mental and emotional appeals: In this type, both mental and emotional appeals are combined to influence the audience.

Category of media frameworks used: This means the tool used by government application accounts (Absher – Tawakkalna – Sehhaty) to highlight the topic from certain aspects that are consistent with the objectives of the topics raised, and it can be divided into:

-       Humanitarian Concerns Framework: This means that the human side of the topic is taken into account and the message is highlighted through this side.

-       Analytical framework: This framework is concerned with the topics that Tawakkalna account has worked to explain and clarify.

-       Responsibility attribution framework: it is meant to remind individuals who is responsible for a particular event.

-       Warning framework: It is intended to remind individuals of the danger of leaving precautions and the damage caused by leaving them.

- Praise framework: Highlighting the positive aspects of a topic, or mentioning the extent of benefit from the Tawakkalna application.

Validity and stability procedures for the content analysis form: Validity and stability tests are conducted to ensure the credibility and accuracy of the study tool and confidence in its results.

Validity measuring: To ensure apparent validity, the analysis form was presented to a number of specialists with experience in the field of media and public relations, to judge the objectivity and comprehensiveness of the form and to ensure its ability to measure data, based on the opinions and comments of the experts, amendments were made to the form, and the aim of presenting it to the arbitrators was:

1- Review the scientific material contained in the analysis form and its relevance to the objectives of the study.

2- Study the general form of creating the content analysis form.

3- Review the tables to determine the efficiency of the groups in achieving the objectives of the study.

4- Review the subject headings and the categories listed under them and the extent of their connection to the study.

5- Review the wording of the categories and ensure their clarity and comprehensiveness.

Stability procedures

Stability means the possibility of applying the form and obtaining consistent results every time. To ensure the validity of the analysis form, the method of retesting the analysis material was used to determine the stability coefficient by retesting the content analysis on a number of random tweets, which amounted to 30 tweets from government application accounts (Tawakkalna-Absher-Sehhaty) after a week due to lack of time. The stability coefficient between the two answers was measured using the alpha stability coefficient, and the test showed that the content analysis paragraphs obtained a stability coefficient of 87.10%, this is an indicator of the stability of performance and confirms the validity of the form for study.

Procedural concepts

Procedural definitions are important in that they clarify the meanings and terms contained in the research and allow the researcher to move from the level of constructive and theoretical concepts to the level of actual and realistic observation and inspection of the research topic, which makes the reader able to understand the correct message of the writer's intent, which he later relies on in determining the methodological steps followed in the study (Al-Azzawi Rahim, 2008).

1. Electronic applications: They are computer programs designed to perform functions for the user, running on the IOS or Android operating system. The applications are easy to use, inexpensive, and can be downloaded for free. It provides several services: calling, messaging, browsing, chatting, social networking communications, voice, video, etc. (Islam Rashedul et al., 2010).

2. Digital content: Content on the Internet in its various written, audio and visual forms.

3. Twitter-(X): an electronic social networking and microblogging network in which registered users can send and review SMS messages with a limit of 280 characters and share other types of content such as photos and videos in addition to website links.

4. Absher application: the electronic website of the Ministry of Interior, provides the services of the Saudi Ministry of Interior digitally and integrally to citizens, residents, and

visitors, by taking advantage of the technical capabilities, through automated services with reliability, security and high efficiency.

5. Tawakkalna application: the Saudi authority for data and artificial intelligence "Sadaya" launched it to support government efforts to counter the coronavirus, it aims to contribute to the management of the process of granting permits electronically. The application has launched several important services such as the "digital identity" project through the application, including the" national identity "for Saudis, and the" Resident identity " for residents, to enable its official use as an electronic media of proof, within a joint cooperation aimed at digitizing government identification documents.

6. Sehhaty application: an application launched by the Saudi Ministry of Health to provide health services to individuals within the kingdom. It allows the user to access health information and get a number of health services provided by various entities in the Saudi health sector.

7. Strategies: a set of methods, arts, and ideas that help in making appropriate plans and contribute to dealing with various circumstances to achieve correct results.

8. Governmental institutions: These are institutions that are owned by the state and provide their services to the community.

9. E-government: It is a system based on the transfer of transactions and government services on the Internet.

Media Richness Theory: Media Richness Theory describes the criteria for choosing between electronic media according to their degree of information richness and focuses more on interactive forms of two-way communication between the communicator and the audience receiving the message. The theory asserts that the media that provide feedback are richer, and the less ambiguity the communication is effective, the richer the information finds a space of common meanings using a particular communication media (Jaber Najla, 2015).

The emergence of the media richness theory:

Richard Daft and Robert Lengyel introduced the media richness theory in 1984, which was developed primarily to describe and evaluate the communication media within organizations. It relied on the theory of information processing and how information is exchanged within organizations. The goal of the media richness theory is to overcome the communication challenges facing organizations, such as unclear messages or messages with contradictory interpretations, based on information processing theory and how information is exchanged within organizations (Daft and Lengel, 1984). The goal of media richness theory is to overcome communication challenges facing organizations such as unclear messages or messages with contradictory interpretations, the theory of media richness also aims to differentiate between communication media on the basis of their degree of richness in achieving the greatest amount of interaction between the media and the audience (Al-Tarabishi and Al-Sayed, 2006).

This theory also assumes two basic hypotheses:

● First: Technological media possess a large amount of information, in addition to the diversity of content provided through them, and these media can overcome the ambiguity and doubt that afflict their users.

●Second: there are four basic criteria for ranking the richness of the media ranked from the highest to the lowest in terms of the degree of richness, namely the speed of reaction, its ability to transmit various signals using modern technological technologies such as multimedia, the use of natural language, personal focus on the medium (Jaber Najla, 2015).

Reasons for using the media richness theory: We use of this theory is due to the explanation of the richness of the media and the richness of the information it provides to the public, this theory was chosen because of its connection to the research topic, as we will use this theory to monitor the extent of the influence of the media by spreading awareness about the government institutions activities and the richness of information provided by these accounts and applications, by studying a number of tweets published in government application accounts (Absher- Tawakkalna- Sehhaty) and also by publishing a questionnaire to a number of audiences on social media sites.

Results and Discussions:

The analytical study was conducted on a purposive sample of (271), with (154) tweets for the Tawakkalna account, (77) tweets for the Absher account, and (40) tweets for the (Sehhaty) account. It was chosen based on the time limits of the study, starting from November 9, 2021, until September 16, 2023.

First: Tweets by the three government accounts:

Table (1) Characteristics of the study sample

Characteristic	Tawakkalna account	Absher account	Sehhaty account
documentation	documented	documented	documented
Join Date	April 2020	February 2012	April 2011
Followers No.	300002	2000000	4700000
Following No.	3	1	60
Personal profile	Tawakkalna logo	Absher logo	Ministry of Health logo
Account's head	Barcode to download the app.	Ministry of Interior	Raising awareness of taking the vaccine importance
Bio about Ministry account	Available in brief	Available in brief	Available in brief
Information page links	Website link	Website link	Website link

It is clear from Table (1) that the government applications (Tawakkalna, Absher, and Sehhaty) have Twitter accounts, and are followed by a large number of citizens and residents, Sehhaty account includes the logo, bio, and electronic links, which increases followers' confidence in the credibility of the account and the content, and helps them understand its purpose, target group, and main advantages. As well as ease of browsing and increased interactivity and participation, it ranked first in terms of followers (4 million and seven hundred thousand followers), this indicates trust and credibility, as the account is the oldest in government applications (2011). In addition to periodically updating news and information and presenting them clearly, this contributed to increasing awareness of the application, following it, and interacting with it.

This result agreed with the study (Hanan Al-Subhi, 2021) that all health system accounts are officially documented on Twitter, which gives a good indication that government institutions in the Kingdom of Saudi Arabia are officially moving towards electronic governance, the number of audiences who follow the accounts varies greatly and is due to the audience interests and the type of content provided by the Ministry of Health, which provides the content to all members of society and is also considered the oldest.

The Absher account came in second place with two million followers. This may be due to the nature of the services and their importance provided by the Ministry of Interior to

citizens and residents, as the government and private sectors were linked for the purpose of facilitating and speeding up transactions. It also includes the logo, bio, and electronic links, to facilitate obtaining information, understanding the organization's vision, and awareness of its activities and services.

Tawakkalna account offers a set of distinctive and comprehensive services such as education, health, religion and public services, it also played a vital role in curbing the coronavirus pandemic by breaking the chain of infection, using the display of a user's health status through colored codes, as well as vaccinations for the Coronavirus. It was launched in 2020 and is followed by three hundred thousand and thirty-two followers, and this indicates the credibility of the account. It includes the logo, bio, and electronic links, which confirm that this account is official and its information is correct and contributes to awareness of the activities of government institutions, which facilitates the completion of tasks and procedures.

This result is consistent with the studies of (Al-Mutairi Masoud, 2020), (Al-Majid Abdul Rahman, 2020), (Zahr Susan, 2020), and (Al-Ayed and Al-Hamoudi 2019) the efforts of government institutions to develop work environments and transform them into digital environments according to advanced competitive technical and operational advantages in various diverse business sectors, to enhance direct communication with citizens and residents, provide them with government information, and connect them to all electronic services to facilitate their lives by offering safe, comprehensive, efficient and effective electronic applications.

Type of services announced on the three government accounts:

Table (2) Type of services announced on the three government accounts

Category	Tawakkalna		Absher		Sehhaty		Total	
	Feq.	%	Feq	%	Feq	%	Feq	%
Electronic services	107	70	25	33	-	-	132	48.70
Health service	17	11	-	-	40	100	57	21.03
Social service	3	2	1	1	-	-	4	1.47
Awareness services	-	-	5	6	-	-	5	1.84
Mix	27	17	46	60	-	-	73	26.93
Total	154	100	77	100	40	100	271	100

It is clear from Table (2) the trend of government institutions to launch electronic applications that work to achieve sustainable development and community luxury by offering a variety of services that can be accessed via computers and smartphones, where electronic services reached the lead by 48.70%, and the percentage of electronic services in Tawakkalna reached 70% and 33% in Absher, this percentage is due to the nature and quality of the services provided and the trend of both applications in supporting and employing technology, in addition to the world's trend during the Corona pandemic towards working remotely and enhancing digital communication, followed by the mix of services at 26.93%, the Absher application topped the list with a percentage of 60% in providing a mix of awareness, electronic and social services. This is due that the Absher application is a tool directed by the Ministry of Interior to complete government transactions and procedures, meet the needs of all segments of society, and raise the efficiency of government administration and represented health services 21.03%. The Sehhaty account took the lead in providing health services by 100%, as the Ministry of Health launched the Sehhaty application to provide health services to all citizens and residents of the Kingdom (in booking appointments, providing primary health care,

immediate remote consultations, monitoring vital signs, and providing medications), social and awareness services represented 3.31%, and this is due to the interest of the three applications in electronic services and the combination of services, such as Tawakkalna and Absher, due to their endeavor to launch integrated and harmonious services with digital technologies, and health services, as in Tawakkalna and Sehhaty. The Ministry of Health sought to use the Tawakkalna and Sehhaty accounts to support its vision and achieve its goals, this result is consistent with the study (Saleh Al-Anzi, 2023) on the ability of the Ministry of Health account on Twitter to meet its cognitive needs.

Types of values included in the three government accounts:

Values are considered a fundamental requirement and a major guide in the design, development, and decision-making processes by designers and developers of applications. They also play a vital role in forming the behavior and identity of users, it reflects the Social, national, moral, and personal importance that contributes to building a stable society and keeping pace with digital developments.

Table (3) Types of values included in the three government accounts

Category	Tawakkalna		Absher		Sehhaty		Total	
	Feq.	%	Feq.	%	Feq.	%	Feq.	%
Social values	9	5.84	1	1	16	40	26	9.59
National values	16	10.39	47	61	-	-	63	23.25
Moral values	53	34.42	-	-	-	-	53	19.56
Individual values	76	49.35	29	38	24	60	129	47.60
Total	154	100	77	100	40	100	271	100

It is clear from Table (3) that e-government applications adopt individual, national, moral, and social values, which indicates that government institutions have adopted the Kingdom's Vision 2030 in relying on three axes (a vital society, a prosperous economy, and an ambitious nation) as a reference in making decisions. Therefore, the results resulted in individual values being ranked first with a percentage of 47.60%, followed by national values with a percentage of 23.25%, followed by moral values with a percentage of 19.56%, and then social values with a percentage of 9.59%.

Individual values contribute to the formation of behavior, develop identity, build relationships, and strengthen moral values, they are the basis on which the individual rests. Therefore, individual values ranked first with a rate of 47.60% in the three accounts and achieved a higher rate in the Sehhaty account, where it represented 60%, followed by the Tawakkalna application and then Absher. This is due to the applications' interest in the individual and his family, and this interest enhances personal responsibility, will, challenge, commitment, and discipline, this result reflects the interest of government institutions in strengthening individual values to build a stable, creative, tolerant and interactive society in community activities.

Nature of the topics raised on the three government accounts

Table (4) The nature of the topics raised on the three government accounts

Category	Tawakkalna		Absher		Sehhaty		Total	
	Feq.	%	Feq.	%	Feq.	%	Feq.	%
Humanity	8	5	1	1	-	-	9	3.32
Economic	5	3	-	-	4	10	9	3.32
Social	6	4	-	-	10	25	16	5.90

Healthy	26	17	-	-	20	50	46	16.97
Awareness	109	71	76	99	6	15	191	70.5
Total	154	100	77	100	40	100	271	100

It is clear from Table (4) the diversity of topics raised in the three accounts, as awareness topics represented 70.5% of the three accounts, this is consistent with the objectives and nature of the services provided by the Ministry of Interior to both citizens and residents, represented by civil affairs, passports, Prisons, Public Security and traffic, as stated in the Absher website (absher.gov.sa). In Tawakkalna account, it was represented by 71%, and this percentage is proportional to the vital role that the application played in limiting the spread of the Coronavirus by spreading awareness about the coronavirus pandemic and its risks, methods of preventing the virus, the importance of vaccinations, announcing the number of cases infected with the virus, and how to provide support to them and those in contact with them. Awareness topics for the Ministry of Health (Sehhaty) represented 15%, as awareness represents part of health services directed to citizens and residents.

The Kingdom was concerned with providing health services that are in line with international practices, so health topics represented 16.97%, and the Sehhaty account topped the list in health topics with 50%. This result is due to the Ministry of Health's efforts to provide a healthy family life and a healthy lifestyle for citizens and residents by following them up and providing consultations.

Objectives of the tweets raised by the three government accounts

Table (5) Objectives of the tweets raised by the three government accounts

Category	Tawakkalna		Absher		Sehhaty		Total	
	Feq.	%	Feq.	%	Feq.	%	Feq.	%
Warning	-	-	2	2.5	-	-	2	0.74
Awareness	4	3	2	2.5	6	15	12	4.43
Providing services and facilities	50	32	21	27	34	85	105	38.75
News	57	37	15	20	-	-	72	26.6
Advertisements	4	3	2	2.5	-	-	6	2.21
Mix	38	25	33	43	-	-	71	26.2
Other	1	1	2	2.5	-	-	3	1.1
Total	154	100	77	100	40	100	271	100

Table shows (5) the emergence of the goals of tweets from the goals of electronic applications launched by government institutions, where these goals varied from warning, awareness, providing services and facilities, news, advertisements, and a mix, providing services and facility came in first place with a rate of 38.75%. Sehhaty account achieved a higher rate of 85%, and this percentage expresses the goals and procedures of the Ministry of Health, then the news goals came in second place with a percentage of 26.6%, whereas the Tawakkalna account had the highest percentage and this reflects the vision and goals of the Tawakkalna application, then a mix of goals came in third place with a percentage of 26.2%. Absher account accounted for the lead by 43% and then Tawakkalna in providing the mixing, then awareness goals came in fourth place, and were dominated by Sehhaty account, then came the advertising and the warning goals.

This result confirms that electronic applications reflect the goals of government institutions in the light of which decisions and actions are taken, this is evident through

the Absher account, which included all the goals to clearly reflect the vision and goals of the Ministry of Interior, as well as through Sehhaty account, where its goals were formed in providing services, facilities and awareness, and this clearly embodies the goals of the Ministry of Health, while the Tawakkalna application included all the goals except the warning goals, and this reflects the integrated services provided by the application.

Communication methods and strategies used in the three government accounts:

Table (6) Communication methods and strategies used in the three government accounts

Category	Tawakkalna		Absher		Sehhaty		Total	
	Feq.	%	Feq.	%	Feq.	%	Feq.	%
Dialogue method	39	25	7	9	2	5	48	17.77
Persuasion method	8	5	1	1	2	5	11	4.05
Confirmation method	53	34	12	16	8	20	73	26.93
Media method	50	33	56	73	26	65	132	48.70
Consensus building method	4	3	1	1	2	5	7	2.58
Total	154	100	77	100	40	100	271	100

In light of Vision 2030, government institutions are required to work according to high standards of flexibility, transparency, and speed of delivery. Therefore, many communication methods and strategies were employed in government accounts, as shown in Table (6), with the goal of attracting the public's attention, building strong relationships dominated by trust and transparency, and effectively participating in the government institutions activities, the media method represented the highest percentage (48.70%) and was widely used by the Absher and Sehhaty accounts to convey important information and news quickly and effectively and to enhance awareness of the activities, services, and goals of the Ministries of Interior and Health, followed by the confirmation method (26.93%), and it was used in Tawakkalna account with the notification method clearly to emphasize the importance and validity of the information, followed by the dialogue method (17.77), and it was used in the three accounts to enhance the effectiveness of communication and participation and build their confidence. It was used to a greater extent in the Tawakkalna account, where it represented a percentage of 25%, followed by the persuasion method, 4.05%, then the consensus-building method. The multiplicity of communication methods and strategies increases the public's understanding and knowledge of the goals and tasks of government institutions and effectively involves them in two-way dialogic communication which contributes to creating a vital society that contributes to the prosperity of its economy and the building of its nation.

This result is consistent with the study (Hassan Mahasneh, 2023) in which the media strategy ranked first, as its results showed that the most important communication strategies for digital public relations used in universities were represented in the first place by the media strategy, and disagreed with this result regarding the priority of the persuasion strategy over the dialogue strategy.

Persuasive appeals used in the three government accounts:

Table (7) Persuasive appeals used in the three government accounts

Category		Tawakkalna		Absher		Sehhaty		Total	
		Feq.	%	Feq.	%	Feq.	%	Feq.	%
Mental	Evidence	19	12	1	1.2	34	85	54	19.93

appeals									
	Facts	101	66	61	79.2	-	-	162	59.78
	N.	13	8	4	5.2	4	10	21	7.75
Emotional appeals	Enticement	4	3	3	4	-	-	7	2.58
Mental and emotional		17	11	8	10.4	2	5	27	9.96
Total		154	100	77	100	40	100	271	100

Various persuasive appeals play an important role in the individual's positive interaction with the content, which creates constructive and cooperative discussions between government institutions and community members, Table (7) shows the most important of these appeals: mental appeals which ranked first at 87.46% in the three accounts. It used several mechanisms and techniques, such as evidence, which represented 85% of Sehhaty's account. Then the facts, which represented 79.2% in the Absher account, then the numbers, which represented a higher percentage in the Sehhaty application, at a rate of 10%. These techniques and tools are compatible with the goals, strategies, procedures, and policies of government institutions based on the Kingdom's vision, which contributes to building credibility, trust, and support for its decisions by citizens and residents. Then came the mix of mental and emotional appeal. Using this mix increases the desire of a large number of audience segments to interact and communicate positively. It also improves the public's awareness of the activities of government institutions. Emotional appeals came in last place, using the technique of enticement, as it increases the continuity of long-term influence for followers and creates a positive mental image of those institutions which increases their support for the goals and decisions of government institutions to build an ambitious nation with a prosperous economy that keeps pace with challenges and developments.

Multimedia used by the three government accounts:

Table (8) Multimedia used by the three government accounts

Category	Tawakkalna		Absher		Sehhaty		Total	
	Feq.	%	Feq.	%	Feq.	%	Feq.	%
Text	2	1	1	1	-	-	3	1.10
Text and link	-	-	2	3	-	-	2	0.73
Image	-	-	2	3	-	-	2	0.73
Text and image	12	8	8	10	6	15	26	9.59
Text, image, and link	-	-	58	75	28	70	86	31.36
Text and video	33	21	6	8	-	-	39	14.39
Text and infographic	89	58	-	-	-	-	89	32.84
Text, infographic and link	9	6	-	-	-	-	9	3.32
Text, video, and link	-	-	-	-	4	10	4	1.47
Text, GIF file, and link	-	-	-	-	2	5	2	0.73
Text and GIF file	9	6	-	-	-	-	9	3.32
Total	154	100	77	100	40	100	271	100

It is clear from Table (8) that the three government accounts rely on communicating effectively with followers by employing many communication mechanisms and techniques to increase awareness of the activities and services of government institutions. The use of text and infographics ranked first with a rate of 32.84%, followed by the use of text, an image, and a link with a rate of 31.36%. This was followed by the use of text and video at a rate of 14.39%, then text and an image at a rate of 9.59%, then text, an infographic and a link, a GIF file and text at a rate of 3.32%, then text, a video and link at a rate of 1.47%, then text at a rate of 1.10. %, (Text and link, image, GIF file, link, and text) came in last place with a rate of 0.73%.

This result agreed with the study (Hanan Al-Subhi, 2021) in that the health system relied on many patterns in sharing information on Twitter with its audience, including texts, images, video, infographics, and live broadcast service, which includes the latest news and updates, using different patterns in its tweets, it differed from it in that the use of images and video took the lead at a rate of 76.70%, followed by the use of text and links at a rate of 11.60, while the use of statistics style came in last at 0.10%, while in the current study, the use of text, image, and link came in at 70% in the Sehhaty account, then came the use of text and an image at a rate of 15%, then text, a video and link at a rate of 10%, and in last place came the use of a GIF file, a link and a text at a rate of 5%.

Media frameworks used in the three government accounts:

Table (9) Media frameworks used in the three government accounts

Category	Tawakkalna		Absher		Sehhaty		Total	
	Feq.	%	Feq.	%	Feq.	%	Feq.	%
Human concerns framework	7	5	1	1	-	-	8	2.95
Analytical framework	116	75	60	77.92	38	95	214	78.97
responsibility attribution framework	6	4	10	12.98	-	-	16	5.90
Warning framework	-	-	2	3	2	5	4	1.48
Praise framework	25	16	4	5.19	-	-	29	10.70
Total	154	100	77	100	40	100	271	100

It is clear from the data in Table (9) the multiplicity of media frameworks used in government accounts on Twitter- (X) in presenting topics, as the category (Analytical Framework) came in first place, and it was the most in the Ministry of Health's account (Sehhaty) at a rate of (95%) at (38%)Tweet, followed by Absher account with a percentage of (77.92%) with (60) tweets, followed by the Tawakkalna account with a percentage of (75%) with (116) tweets, and the use of diversity in strategies came in second place (the praise framework), and it was the most in the Tawakkalna account (16%) with (25) tweets. It was followed by Absher account with a rate of (5.19%) with (4) tweets, and the lowest was in the Ministry of Health (Sehhaty) account with a rate of (0%) with (0) tweets. The third place was (responsibility attribution framework), and it was the most used in the Absher account at a rate of (12.98%) with (10) tweets, Tawakkalna account comes next with (4%) with (6) tweets, and this framework was not used in the Ministry of Health's account (Sehhaty). It came in fourth place (the humanitarian concerns framework), as it was the most used in the Tawakkalna account at a rate of (5%) with (7) tweets, followed by the Absher account (1%) with one tweet. This media framework was not used in the Ministry of Health (Sehhaty) account. Finally, the warning framework was the largest in the Ministry of Health's (Sehhaty) account (5%), with two tweets, followed by the Absher account (3%) with two tweets, and this is

considered an indication of government accounts' reliance on the analytical framework to explain and clarify their services.

Effectively employing media frameworks contributes to understanding the content, information, and events published by government institutions. Therefore, the three accounts sought diversity in media frameworks, using multimedia mechanisms and presenting information in Arabic and English.

This result is consistent with the study (Saleh Al-Anazi, 2023) in that the nature of the content provided by the Ministry of Health is dominated by scientific and medical terminology that needs further explanation and clarification. Therefore, it sought to employ multimedia in its media messages, this contributed to the public's understanding of relevant developments and changes, and it also confirmed that the content published on Twitter helped them make decisions related to work aspects of the Ministry of Health. Therefore, the Ministry of Health's account enjoys great credibility and trust, as it is followed by 4 million and seven hundred thousand followers.

Linguistic level of tweets from the three government accounts:

Table (10) Linguistic level of tweets from the three government accounts

Category	Tawakkalna		Absher		Sehhaty		Total	
	Feq.	%	Feq.	%	Feq.	%	Feq.	%
Classical style	83	91	72	94	40	100	195	93.75
Colloquial style	8	9	5	6	-	-	13	6.25
Total	91	100	77	100	40	100	208	100

Table (10) shows that the three accounts used the classical style in most tweets, representing 93.75%, which contributes to clarifying the meaning, raising the quality of services, and strengthening communication between citizens, government institutions, and the private sector, and this is what the vision confirms, while the colloquial style represented 6.25%, this is a small percentage, and this result confirms that the Arabic language is the most important component of national identity and a symbol of the culture of the Kingdom of Saudi Arabia.

The Ministry of Health used the Arabic language in its tweets and issued the classical style 100%, this result is consistent with the study (Hanan Al-Subhi, 2021) in that Arabic is the language most used in health system tweets.

The style of tweets used in the three government accounts:

Table (11) The style of tweets used in the three government accounts

Category	Tawakkalna		Absher		Sehhaty		Total	
	feq	%	feq	%	feq	%	feq	%
Original tweets	139	90	73	95	36	90	248	91.51
Quoted tweets	5	3	-	-	4	10	9	3.32
Retweets	10	7	4	5	-	-	14	5.17
Total	154	100	77	100	40	100	271	100

Table (11) shows that original tweets represented 91.51%, followed by retweets from other accounts at a rate of 5.17, followed by quoted tweets with a percentage of 3.32%, and Absher account led with a percentage of 95% of original tweets and it did not include quoted tweets, Tawakkalna and Sehhaty accounts came in second place among the original tweets. This result indicates that the tweets are of importance and quality, and

target followers effectively, which helps attract them, increase their confidence, and quickly spread them.

This result is consistent with the study (Hanan Al-Subhi, 2021) that 84.90% of the health system's tweets were published by it.

Second: Followers' response to government accounts' tweets:

- The direction and pattern of comments raised, the language used, and the linguistic level used.

Table (12) Pattern of comments raised on tweets of the three government accounts

Category		Tawakkalna		Absher		Sehhaty		Total	
		Feq.	%	Feq.	%	Feq.	%	Feq.	%
Comments direction	Positive	13	16	8	10	15	37	36	18
	Negative	67	84	69	90	25	63	161	82
	Total	80	100	77	100	40	100	197	100
Comments patterns	Inquiry	56	70	48	62	11	27.5	115	58
	Praise	8	10	3	4	6	15	17	9
	Suggestions	4	5	3	4	5	12.5	12	6
	Complaints	7	9	22	29	17	42.5	46	23
	Unrelated	5	6	1	1	1	2.5	7	4
	Total	80	100	77	100	40	100	197	100
Language used	Arabic	70	90	77	100	36	90	183	93
	English	10	10	-	-	4	10	14	7
	Total	80	100	77	100	40	100	197	100
Linguistic level used	Classical	41	51	11	14	1	1	53	27
	Colloquial	39	49	66	86	39	99	144	73
Total		80	100	77	100	40	100	197	100

It is clear from Table (12) the nature of the pattern of followers' comments on tweets from government accounts (Tawakkalna - Absher - Sehhaty), the category of (passive) followers came in first place with a percentage of (82%) with (161) tweets, followed by the category of (positive) followers with a percentage of (18%) with (36) tweets, this may be due to the need to develop content periodically to keep pace with developments and be based on expert opinions, as well as the opinions of the public through conducting periodic evaluations of the services provided, the content presented, communication strategies and mechanisms, and the extent of their compatibility with the objectives of the government institutions affiliated with them, raising community awareness of the importance of these accounts through various communication channels, motivating them to continuously communicate, increasing the number of workers in these accounts, raising their competencies, and training them on rapid response.

The study (Hassan Mahasneh, 2023) also recommended motivating and educating the internal and external public regarding their roles through the importance of the perceived benefit that the beneficiaries of the service will obtain while they use the organization's digital communication media and obtain its services easily and conveniently.

This result is consistent with the result of a study (Hessa Al-Ratiq, 2019) that more than half of those who follow government institutions' pages are dissatisfied with them, as their role is limited to reporting and educating, this may be due to the fact that social media channels for communicating with the government are still emerging in the Kingdom. Likewise, with the study (Hanan Al-Subhi, 2021), the audience's interaction with the health system's tweets was like 47.41%.

This result differed from the results of the study (Saleh Al-Anazi, 2023) on the presence of a high positive attitude among the public, and they interact with the content published on the Ministry of Health's account by participating, this is due to the importance of the published content and the public's desire to disseminate the content to all of its followers.

In the other division, it shows the pattern of comments on government accounts (Tawakkalna - Absher - Sehhaty), where the (inquiry) category came in at (58%) with (115) tweets, the (complaints) category came in at (23%) with (46) tweets, followed by the (praise) category with (9%) with (17) tweets, the (suggestions) category also had a rate of (6%) with (12) tweets, and finally the (unrelated) category had a rate of (4%) with (7) tweets, this result indicates a two-way dialogue and audience interaction on the three accounts' tweets.

The third division shows the language used in followers' comments on government accounts (Tawakkalna – Absher – Sehhaty), where the (Arabic language) category came in at (93%) with (183) tweets, and the (English language) category with (7%) with (14) Tweets.

The fourth division explains the linguistic level used in followers' comments on government accounts (Tawakkalna - Absher - Sehhaty), The (colloquial style) category came in at (73%) with (144) tweets, followed by the (classical style) category with (27%) with (53) tweets.

The results of the third and fourth division indicate that government accounts provide Arabic and English languages, in addition to the fact that the Tawakkalna account provides the Urdu language, to increase the interaction of the widest possible number of followers (Arab citizens and residents, and non-Arabic speaking residents), this was confirmed by the study (Hanan Al-Subhi, 2021) in that the Arabic language is the most widely used language in the health system's tweets at a rate of 72.41%, while the percentage of use of the English language reached 6.40%. The use of both languages reached 20.70%. In light of Vision 2030, government institutions seek to meet the needs of citizens and residents, and raise the quality of their services through everyone's interaction.

Third: Three government accounts' forms of response to their audience's comments:

Table (13) Media attached to the responses to the audience of the three government accounts

Category	Tawakkalna		Absher		Sehhaty		Total	
	Feq.	%	Feq.	%	Feq.	%	Feq.	%
text	70	87.5	76	99	37	92.5	183	93
Text and image	6	7.5	1	1	3	7.5	10	5
Text and video	4	5					4	2
Total	80	100	77	100	40	100	197	100

It is clear from the previous Table (12) that followers' comments varied between praise, inquiries, complaints, and suggestions, which resulted in a diversity in the response of those in charge of the three government accounts in a clear, concise, and professional manner, as in Table (13), the response was in the form of text, which represented 93%,

then in the form of text and images, which represented 5%, then text and video, which represented 2%, the response form of those in charge of Absher and Sehhaty accounts was based on text 99% for Absher account, 92.2% for Sehhaty account, text and an image for Absher and Sehhaty accounts, which were represented by 1% for Absher account, and 7.5% for Sehhaty account, while the Tawakkalna application varied between text,(text and image), and (text and video).

The response of those in charge of the three government accounts to the public's comments confirms the effectiveness of digital governance by seeking to work according to high standards of transparency, accountability, and flexibility, it also enhances the quality of services through interaction between government institutions and community members by sharing their opinions and suggestions.

This result is consistent with the study (Hanan Al-Subhi, 2021) that the percentage of use of responses to public tweets by the health system is 98.80%, this indicates that the health system uses Twitter as a media website to convey information and facts to the public and respond to inquiries. It agrees with the study (Hassan Mahasneh, 2023) that the benefits that accrue to the university as a result of employing digital public relations represent, in order of Importance, the most appropriate means of conveying university news to internal and external audiences, it also creates a kind of connection between the university and its audience, and is characterized by providing quick responses to the public, and increasing the degree of interaction between the university and its audience.

It differs from the results of the study (Hassan Niazi Al-Saifi, 2018) that universities do not fully embrace the idea of integrating dialogic capabilities and two-way communication features into their activity via Twitter, according to the analysis, balanced two-way communication was only applied in 0.6% of the tweets, and unbalanced two-way communication was only mentioned in 4.3% of the tweets. Dialogue reactions only appeared in 16% of tweets, and audience comments and inquiries were only responded to in 0.4%, it emphasized that a presence on Twitter is not sufficient without dialogue communication, because reaping its benefits depends on the effectiveness and strategy of using it to engage the public, and agrees that these accounts need a quick and immediate response.

Conclusion

The results provided a basis for the role of Saudi government applications in understanding and enhancing the effectiveness of the government institutions activities in accordance with Vision 2030 through analyzing the tweets of the Tawakkalna, Absher, and Sehhaty accounts on the Twitter website, the responses of the followers to them, and the response of the administrators of the three accounts to the comments.

1.   Three accounts represented a qualitative leap in enhancing interaction between government institutions and followers of these accounts through the use of Arabic and English, with the exception of the Tawakkalna account, which added the Urdu language.

2.   Facilitating access to information and sharing it via links, which contributed to its dissemination. It was also based on a variety of services, the most prominent of which were electronic services.

3.   It broadcasted many values, topped by individual values, followed by national values, which are considered a main guide to moral and social values based on these services and values, the content was characterized by diversity, as many topics were presented, and awareness topics occupied first place. These topics had specific and clear goals that served the vision and objectives of government institutions.

4.   The objectives of providing services and facilities came to the forefront, and to achieve these objectives, many communication methods were employed, the most

prominent of which was the media method. It was also based on many persuasive appeals, and mental persuasion took the lead, many media frameworks were used, the most prominent of which was the analytical framework.

5.   It employed many mechanisms and multimedia to share information and respond to comments from its followers, it topped the text and infographic mechanism in sharing information, and the text mechanism in responding to followers' comments, and relied on original tweets to increase the trust of its followers.

6.   Interaction between followers and institutions and creating a two-way dialogue, and this contribution is represented in the followers' response through comments, as the inquiries represented 58% of the comments, and the administrators of these accounts responded by responding to them professionally, but some of them were not immediate, which was the reason for the negative comments, which represented 82%.

Recommendations

The study indicates the need to develop content periodically to keep pace with developments and be based on the opinions of experts as well as the opinions of the public through conducting periodic evaluations of services: Introduction, the content presented, communication strategies and mechanisms, and the extent of their compatibility with the objectives of the governmental institutions affiliated with them, raising community awareness of the importance of these accounts through various communication channels and motivating them to continuously communicate, increasing the number of workers in these accounts, raising their competencies, and training them in rapid response.

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