Deanship of Scientific Research

The Implementation of Higher Education Institutions to Dialogue Communication Principles via Twitter

Hassan Al-Saify¹* [ID] *, Fouda Aisha ¹* [ID] *, Mohamed Hashem ¹* [ID] *, Sally Osama ¹* [ID] *, Shaimaa Darwish ²* [ID]

¹ Department of Mass Communication, College of Arts, King Faisal University, Al-hasa, Saudi Arabia
² Department of English Language, Faculty of Human Studies, Al-Azhar University, Cairo, Egypt

* *Corresponding author:*
habualila@kfu.edu.sa

Abstract

Objectives: The study aimed to investigate how public relations are used in Saudi universities' social media and to what extent they benefit from the advantages of these platforms in higher education institutions.

Method: The study used a descriptive method, and content analysis was used to collect the data. The content published by public relations on the official accounts of King Faisal University, King Abdulaziz University, and Al Faisal National University on Twitter was analyzed in light of the principles of dialogue communication theory by Kent and Taylor as well as models of public relations practice. The study was conducted during April, May, and June 2022, representing the study periods, exams, and summer vacation.

Results: The results revealed that Twitter is mainly used by public relations in Saudi universities for publishing and promotion. The results also showed differences between universities in dialogue with their public and models of public relations practice. Government universities were less likely to apply the principles of dialogue communication and only interacted with the public on rare occasions, using it as a tool for promotion, publicity, and information in one direction, limiting the benefits of two-way dialogue.

Conclusion: Universities need to pay more attention to dialogue with the public to maximize the benefits of untapped communicative abilities.

Keywords: Public relations applications, public relations models, social media platforms, dialogic communication theory of public relations.

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تطبيق مؤسسات التعليم العالي لمبادئ الاتصال الحواري عبرتويتر

حسن الصيفي¹*، فودة عيشة ¹، محمد هاشم¹، سالي أسامة ¹، شيماء درويش²
¹قسم الإعلام، كلية الآداب، جامعة الملك فيصل، الأحساء، السعودية
²قسم اللغة الإنجليزية، كلية الدراسات الإنسانية، جامعة الأزهر، القاهرة، مصر

ملخَّص

الأهداف: استهدفت الدراسة تعرُّف كيفية استخدام العلاقات العامة في الجامعات السعودية لشبكات التواصل الاجتماعي، ومدى استفادة العلاقات العامة في مؤسسات التعليم العالي من الميزات التي تتيحها هذه المنصات.

المنهجية: استخدمت الدراسة المنهج الوصفي، وفي إطاره اعتمدت الدراسة تحليل المضمون أسلوبا لجمع البيانات. تم تحليل المحتوى المنشور من قبل العلاقات العامة في الصفحات الرسمية لجامعة الملك فيصل، وجامعة الملك عبد العزيز، وجامعة الفيصل الوطنية على تويتر، في ضوء مبادئ نظرية الاتصال الحواري لكينت وتايلور ونماذج ممارسة العلاقات العامة. وذلك خلال أشهر (نيسان وأيار وحزيران) 2022 كأشهر ممثلة لفترات الدراسة والاختبارات والعطلة الصيفية.

النتائج: كشفت النتائج عن استخدام تويتر من قبل العلاقات العامة في الجامعات السعودية للنشر والدعاية في المقام الأول. كما بين النتائج وجود اختلافات بين الجامعات في الحوار مع الجمهور ونماذج ممارسة العلاقات العامة؛ حيث كانت الجامعات الحكومية أقل تطبيقا لمبادئ الاتصال الحواري، ولا تتفاعل مع الجمهور إلا فيما ندر، كما تعتمده أداة للدعاية والإعلام والترويج في اتجاه واحد، مما يحد من الاستفادة من ميزات الحوار ثنائي الاتجاه.

الخلاصة: تحتاج الجامعات لإيلاء مزيد من الاهتمام بالحوار مع الجمهور حتى تعظم الإفادة من القدرات الحوارية غير المستغلة.

الكلمات الدالة: تطبيقات العلاقات العامة، نماذج العلاقات العامة، منصات التواصل الاجتماعي، نظرية العلاقات العامة الحوارية.

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1.1 Introduction

The study discusses how Saudi universities use social media, particularly Twitter, to disseminate information and strengthen relationships with students and staff. Since most university students in Saudi Arabia have Twitter accounts, the potential audience for these universities on social media is significant. The article highlights that all Saudi universities have a Twitter account, which helps them build an interactive community and receive feedback from current students about their services and programs. The study aims to explore how Saudi universities use social media, specifically Twitter, to facilitate dialogue communication with their audience and benefit from its capabilities to communicate with the public.

1.2 The Significance of the Study

The study on Twitter use by Saudi universities has important implications for future research in sectors beyond universities, such as private or civil institutions, and across other social media platforms due to the continuous growth of social networks. It also fills a gap in the Arab library on the research aspect of digital public relations and introduces a new field of study that has not been explored by researchers in public relations in the Arab world.

Additionally, the study highlights the importance of understanding the theory of dialogue, Grunig and Hunt public relations models, and public relations practices across social networks in expanding our knowledge. It also provides insights into the various uses of social media in higher education and how universities utilize Twitter to build relationships with their audience. This is significant as it can dispel misconceptions regarding the use of social media by universities and provide valuable insights into the effectiveness of social media as a tool for public relations. Overall, this study makes a significant contribution to the field of public relations and social media research.

1.3 The Problem of the Study

The communication environment has undergone significant changes in recent years, leading to the widespread use of social networks for communication and the exchange of ideas and information across societies and institutions worldwide. Scholars have identified the principles of dialogue, as formulated by Kent and Taylor (1998), and the four models of public relations, as proposed by Grunig and Hunt (1984), as crucial frameworks for understanding effective public relations practices.

In this context, a study was conducted to examine the dialogic features of tweets posted by public relations practitioners on the accounts of Saudi universities on Twitter and to determine the extent to which they align with the principles of dialogue and public relations models. The study also aimed to analyze the level of interaction and the subject matter of the tweets to understand the purpose of public relations in Saudi universities' use of Twitter and the nature of the target audience. The goal was to assess how Saudi universities apply the principles of dialogue and public relations models through social media to engage the public in relationship-building activities and leverage the capabilities of Twitter, the most widely used medium in the Kingdom

1.4 Study Questions:

1. What levels of interaction did the university tweets show?

2. How do public relations in Saudi universities respond to the public's needs for information through their Twitter sites?

3. What are the target audiences for university tweets?

4. What types of messages are published by universities?

5. What are the dialogic features in university tweets?

6. What models of public relations appeared in university tweets?

1.5 Hypotheses of the Study

H_1. There are differences in the application of universities to the features of dialogue via Twitter according to levels of interactivity.

H_2. There are differences in the dialogue capabilities of universities via Twitter depending on the type of university.

H_3. There are differences in the appearance of public relations models through university accounts on Twitter depending on the type of university.

H_4. There are differences in the application of universities to public relations models through their Twitter accounts depending on the levels of interactivity.

2. Literature Review

Twitter has become a prominent social media platform in Saudi Arabia, with evidence suggesting that many companies and organizations are using it for official business (Waters, Tindal & Morton, 2018). The emergence of a knowledge society that expects continuous communication has prompted Public Relations (PRs) practitioners to be active on social media to respond to queries in increasingly short-term periods, create and support the organization's news, and protect the organization's brand (Zerfass, 2014). This is especially important for organizations such as colleges and universities that are seeking innovative ways to build relationships through dialogue and interactive two-way communication, which are critical aspects of public relations dialogue and public relations models (Place, 2019).

Twitter has the potential to serve as a powerful PR tool for building mutually beneficial relationships between an organization and the public by allowing for real-time instant messaging, feedback collection, and distribution of information to stakeholders (Araujo & Kollat, 2018). Additionally, it can be used during emergencies or crises to generate real-time messages (Rachunok, 2022). As Sousa et al. (2021) suggest, Twitter can be an enterprise PRs tool because it allows users to broadcast messages through many devices, such as smartphones.

The concept of dialogue has been established by PRs scholars to explore the role of social media in organizational communication and public relations (Place, 2019). Pearson (1989) introduced the concept of dialogue as an ethical approach in public relations, urging practitioners to move from a one-way communication model to a more ethical two-way communication process. Botan (1997) further argued that traditional PR approaches eliminate the public and turn its role into a secondary one, while dialogue brings the public to the state of communication on an equal footing with the organization. This relational framework constitutes a significant shift in public relations theory, encouraging the argument that the role of public relations is the moral backbone of the organization rather than merely an organizational support system that transmits corporate messages without regard to the needs of stakeholders (Cardwell et al., 2017).

The principles of dialogue have been applied to research in various types of organizations, including non-profit organizations, universities, and public relations companies (Rever & Kim, 2006; McAllister-Spooner & Kent, 2007; McAllister-Spooner & Taylor, 2007; Taylor, Kent, & White, 2011; Taylor, Kent, & White, 2013; Taylor & Kent, 2016). These studies have expanded on the Kent and Taylor principles in online dialogues to explore the potential of building an internet relationship and examining the relationship between the use of dialogues, physical response, and crisis management (Kent & Taylor, 1998, 2001).

The exploration of the perceptions of the importance and use of Kent and Taylor's principles on the internet, as well as the organizational factors that may impact the ability of practitioners to effectively utilize the internet in dialogic communication, has been facilitated through the employment of various research methods.. These research methods, such as usability testing, survey research, and interviews with web managers and PR practitioners, have proven fruitful in shedding light on this topic, as evidenced by studies conducted by McAllister-Spooner (2009), Park and Reber (2008), Gordon and Berhow (2009).

For social media analysis, studies have analyzed the content of government agencies' websites via Twitter to understand how actual government agencies' Twitter corresponded to the four public relations models (Waters & Williams, 2017). Other studies have analyzed the content of tweets from colleges and universities (Antwuan, 2013) and Fortune 500 companies (Rybalko & Seltzer, 2010) to understand how these organizations use Twitter for dialogue communication. The Seltzer & Mitrook (2007) study confirmed that weblogs often involve more dialogue features than traditional sites.

2.1 Previous Studies

Previous studies have investigated the application of dialogic communication principles in various types of organizations, including non-profit organizations such as universities (Broekhoven & Goswami, 2021), congressional websites (Taylor & Kent, 2016), and public relations firms (Reber, Gower, & Robinson, 2006). These studies have been complemented by research conducted by Wang and Yang (2019), Kent, Taylor, and White (2013), Seltzer & Mitrook (2007), Taylor, Kent, and White (2011). While some studies have focused on the application of Kent and Taylor's dialogue features to target audiences (Brandi A. Watkins, 2017; Al-Saify, 2018), other studies have expanded the principles of Kent

and Taylor to the field of online dialogue to explore the potential for online relationship building (McAllister-Spooner & Kent, in press; McAllister-Spooner & Taylor, 2007; Seltzer & Mitrook, 2007; Taylor et al., 2001; Taylor & Kent, 2005).

Furthermore, research has examined the relationship between the use of dialogues and actual response (Kent et al., 2003; McAllister-Spooner and Kent, in press), as well as methods for crisis management (Taylor & Perry, 2005). Additional studies have also explored the application of dialogic communication principles in public relations activities in universities, revealing uneven utilization of the advantages of dialogic communication (Paladan, 2018; Peruta & Helm, 2018; Peruta & Shields, 2018; Peruta & Shields, 2017; Hall, 2014; Beverly, 2013; Stageman & Berg, 2013; McAllister-Spooner, 2012).

In the Arab context, Arab studies tended to examine the employment of social networks in Saudi universities, such as the study (Al-Saify, 2018; Hamdan, 2014; Al-Turk, 2013; Al-Masry, 2013), which indicated that social media are strongly present in Arab universities, but they are not taken advantage of the dialogical communication features referred to by Kent and Taylor.

It has also explored the user perceptions of the importance of dialogue principles through usability tests and survey research (McAllister-Spooner, 2008). Interviews and surveys conducted with webmasters and PR practitioners uncovered the perceived perceptions of the importance and use of the Kent and Taylor Principles on the Internet and explored the regulatory factors that may affect practitioners' ability to take full advantage of online dialogue capabilities (McAllister-Spooner and Taylor, in press; Taylor & Kent, 2014).

2.1.1 Aspects of benefiting from previous studies:

By reviewing previous studies, it is clear that most of them are foreign, and there are rarely any Arab studies that analyzed the dialogue features through university websites or investigated how the four models of public relations could be integrated through social media. Moreover, there were only three foreign studies that analyzed the features of the dialogue through the accounts of American universities on Twitter, where they studied the content of the dialogue principles of the actual tweets published by the universities, which explains the importance of the need for this study. The researcher benefited from foreign studies in forming the intellectual and methodological structure of his study, as the tools used in this research are varied, and the aspects and topics dealt with in these studies are multiplied. This helped identify the problem, word its hypotheses and questions, and formulate the theoretical framework.

3.   Theoretical Framework of the Study

3.1.1 Four-Model Public Relations Theory

Public relations practitioners need to be familiar with various theories to develop effective public relations strategies that establish and maintain strong connections with their target audience (Lattimore et al., 2004). The theory of four public relations models is a widely used framework that describes the global practice of public relations and serves as a valuable teaching tool for both basic and advanced public relations practices (Grunig, 2009). The four models - press agentry/publicity, public information, two-way asymmetric communication, and two-way symmetric communication - differ in their approach to communication, with the first two models being one-way communication approaches and the latter two models involving two-way communication processes (Grunig, 2009). Practitioners can use these models to understand the historical development of public relations and select the most appropriate model for their organization based on their objectives, target audience, and communication goals (Grunig, 2009).

A. Press Agency / Publicity

Under the Press / Publicity Model, public relations practitioners try to get publicity or bring media attention to the organization at extraordinary events. The press/publicity agency model is just a one-way communication effort by the organization to convey information to the media (Grunig & Grunig, 2013).

B. Public Information Model

This kind of asymmetric public relations in nature often involves the dissemination of positive information about the organization. This type of public relations is often practiced in government, educational institutions, non-profit organizations, and large corporations (Lattimore et al., 2004).

C. Two-Way Asymmetrical Communication

Grunig (1990) described the two-way model of Asymmetric relations as the use of a method of identifying messages that could receive the support of the mainstream audience without having to change the organization's behavior. Public relations and marketing companies often practice the asymmetric public relations model (Grunig & Grunig, 2013).

D. Two-Way Symmetrical Communication

The bargaining and negotiation approach of the two-way symmetric communication model is popular among practitioners as it can change the relationship between the organization and the public. Combining symmetric and asymmetric two-way communication can increase the effectiveness of public relations (Grunig, 2009). According to Grunig and Grunig (2013), two-way symmetric communication is considered the best model for public relations. The four models of public relations are valuable theories for understanding how and why PR is practiced. However, some researchers have criticized the models for overlapping with each other.

3.1.2 Theory of Dialogue

Kent and Taylor (1998) laid the groundwork for strengthening dialogue relations between organizations and the public on the World Wide Web. In 2002, they introduced a comprehensive theory of communication in public relations, based on a symmetric model of public relations theory. Kent and Taylor (1998) have described dialogue communication as "any mutual negotiation of ideas and views" (p. 325). Kent and Taylor have also developed a theory of dialogue that derives its origins from philosophy and communication theory as an honest and ethical way to guide practitioners and scientists to create and maintain effective relationships between the organization and the public. As a first step towards the formulation of the public relations theory of dialogue, five comprehensive principles were developed, including the implicit and explicit assumptions underlying the concept of dialogue (exchange, proximity, emancipation, risk, and commitment). Although each concept is unique, Kent and Taylor admit that some concepts overlap with each other as dialogue is not necessarily based on a set of rules.

3.1.2.1 Principles of Online Dialogic Public Relations

Kent and Taylor presented a five-part, interactive dialogue that was used to assess the dialogue potential of a number of organizations and industries. The following five principles guide how to integrate public relations successfully on the web, including:

- **Useful Information**

Useful information is achieved when organizations provide information of value to all audiences in a logical hierarchy (McAllister-Spooner, 2009, p. 320) and encourages organizations to respond to stakeholders' questions and concerns and provide a variety of information to site visitors as a means of building the trust and commitment necessary to build a relationship. Kent and Taylor (1998) describe useful information as contact data such as historical information, basic information, and contact information such as phone numbers, e-mail addresses, web addresses, fax numbers, and mailing addresses (p. 328).

- **Easy Interface**

Easy of interface includes the ease of the interface of the site, so that the site is well organized, easy to navigate and to find information, and fast in loading. Moreover, it should contain at least the image of the organization. This includes creating "fun" interfaces that are easy to use. According to Kent and Taylor (1998), "visitors to websites - for informational purposes or even intriguing - should find these sites easy to understand and easy to identify" (p. 329).

- **Conservation of Visitors.**

Websites have features that make visitors attractive to repeat visits, such as updated information, changing issues, special forums, new comments, online question & answer sessions, and online experts to answer questions from interested visitors (Kent & Taylor, 1998). The principle of conservation of visitors has been developed with respect to time, sensitivity to media needs, and the interests of stakeholders. The rule emphasizes that the websites of the organization should include only the basic links to other relevant sites; focal messages; and the content of the site on issues of concern to the public. McAllister-Spooner (2009) describes visitors' conservation as the ability of a website to "show features and links that value

and maintain the value of a visit" (p. 321). Kent and Taylor describe the conservation of visitors as the organization trying to keep visitors in its position as long as possible. This is important because organizations do not want to fall into errors providing many links that take parties away from the organization page to another site. Often, these visitors may not be able to return to the organization's site.

• **Generating Return Visitors**

According to McAllister-Spooner (2009), the site can find ways to create the basis for long-term relationships by providing the features that encourage repeat visits and return to the site again (p.321); Kent and Taylor describe it as an attempt by an organization to make strong efforts to ensure that visitors continue to return to the Organization's website. This is important because the public often responds positively to an organization if the organization is interested in one way or another (1998).

• **Dialogic Feedback Loop.**

The site can "allow the public to query organizations and allow organizations to answer questions" (McAllister-Spooner, 2009). Kent and Taylor (1998) describe dialogue responses as the starting point for organizations to engage in dialogue with the public on the Internet, thus helping to establish mutually beneficial relationships.

3.1.3 The Use of the Two Theories in the Study

The models of public relations practice and the theory of dialogue communication were employed in the study hypotheses. The first two hypotheses are specific to the theory of dialogic communication, and the other two hypotheses are specific to the models of public relations practice.

4.   Methodology

This study belongs to the descriptive research group, which aims to determine the characteristics of a particular phenomenon. The survey methodology sample was chosen as the most appropriate scientific curriculum for the study. Content analysis was utilized as a tool for collecting information and data from the sample of the study, including categories related to response levels, interactivity levels, tweet topics, and target audience. The study also employed the principles of Kent and Taylor and the four models of public relations proposed by Grunig and Hunt. The analysis form was designed based on the public relations models used in previous studies (Waters & Williams, 2010; Edman, 2011), and each tweet could contain multiple themes and public relations models but only one target audience and interaction level.

The study on the use of Twitter by Saudi universities selected a sample of three institutions: Al Faisal University, King Faisal University, and King Abdulaziz University, which were chosen based on their varying levels of Twitter usage. By including universities with different levels of Twitter engagement, the study aimed to provide a more comprehensive understanding of how Twitter is used by Saudi universities for public relations purposes.

The analysis was conducted over three months, specifically during April, May, and June 2022, which were chosen as representative months for the study periods. By analyzing Twitter activity during these months, the study aimed to capture a snapshot of how Saudi universities use Twitter for public relations purposes, while also taking into account any seasonal or temporal variations in Twitter usage.

Overall, the selection of this sample of universities and the choice of study periods were carefully designed to provide a comprehensive and representative understanding of how Twitter is used by Saudi universities for public relations purposes. This approach is important for ensuring the validity and reliability of the study's findings and conclusions. In this study, the "interface ease" was not analyzed, as the features of a single Twitter interface do not vary by user and are simply designed. The total number of tweets published on each university's Twitter page during the study period is presented in a table in the study.

Table (1) shows the total number of tweets published in the sites

University	King Faisal University	King Abdel- Aziz University	Al Faisal University
No. of Tweets	140	108	76

5.   Results

5.1   Level of Interactivity in University Tweets

Table (2) shows the Level of interactivity of tweets published in each site

Level of interactivity	Frequency	%	Average
low	**62**	**19.13**	
medium	**210**	**64.81**	1.9691
high	**52**	**16.04**	
total	**324**	**100**	

The results of the study revealed that all three levels of interactivity were found in university tweets. Medium interactivity was the most common level of interaction, with 210 tweeting from 324 representing 64.81% and 1.9691 average. These tweets included links to videos, images, and other sites. The 19.13% low level of interactivity did not include any links, posts, or other unusual features. The highest level of interactivity was least visible within tweets by 16.04%. High Interactivity tweets consist of messages that were "posts'' or "@replies'' to other users.

5.2   Response of Saudi Universities to Information Stakeholder Needs:

Table (3) shows the Level of response to Information Stakeholder Needs

Presence of response	Level of response	frequency	%
	Low	-	-
Response	**Medium**	-	-
	High	14	0.4
Non- response		2898	99.6
Total		2912	100

The above table provides a real assessment of the response to public information search behaviors based on message and response assessment strategies, where the actual dialogue response is a more accurate measure of the organization's commitment to dialogues. With the exception of the admission and registration response to 14 student questions in two tweets at King Abdel-Aziz University, there is no response from public relations in the Saudi universities, the sample of the study, for public demand and inquiries in the rest of the tweets. The percentage of non-response was 99.4%. This means that PRs are used as a one-way communication tool from the university to the public, which hampers the use of Twitter's interactive capabilities; and continues to apply the misconception that public relations are publishing.

5.3   The Dialogic Features in University Tweets

Table (4) shows The Dialogic Features in University Tweets

Dialogic features	frequency	%
Useful information	288	88.9
Preservation of visitors	214	214
Generation of return visitors	192	192
Dialogic feedbacks	52	52

The results of the analysis of the following four tables revealed that all the principles of the dialogue emerged in university tweets, but the dialogic responses were the least visible as shown in the following features:

1. *The usefulness of Information***:** The useful information came first in the dialogue features that appeared in the Saudi universities' tweets, where they appeared in 88.9% of the tweets. The "usefulness of information" principle was evident in the information about weather alerts, important updates, recruitment information, registration,

competitions, important dates and deadlines, and special events. An example of this is the tweet of King Abdel-Aziz University, "The deadline for withdrawal of the file and the disclaimer from the university for the purpose of re-registration (KAU University, 2022)

2. *Generating of Return visitors*: The principle of "Generation of Return visitors" came second, and appeared in 66% of the Saudi universities' Twitter. The principle was clear in the tweets, which included links to internal or external accounts that highlighted the organization's events. For example, (Alfaisal University, 2022). While this principle is rare in tweets that contain links to the organization's discussion forums or links to the question accounts or links to accounts that allow visitors to request more information.

3. *Conservation of Return Visitors*: The principle of conservation of return visitors came in the third rank with 59.3% of the Saudi universities' Twitter. The principle of maintaining visitors was prominent in tweets that included links to any of the University institution's departments or colleges. Examples of this are the following tweets posted on King Abdel-Aziz University on Twitter and contains the link: "Minister of Education crowned the University in the third place for the award of excellence in care services beneficiaries among Saudi universities http://fb.me/563y4kLQq" (KAU university, 2022). Meanwhile, the tweets of this dialogue principle rarely contained links to any of the other social media sites of the University, except for King Faisal University. KFU published a link to the pictures of some events on its site on Snape Chat or links to some videos produced by the university and was uploaded on The Center's website on Twitter or YouTube.

4. *Dialogic Feedback Loop*: Although Kent and Taylor provided a blueprint for practitioners to integrate dialogic features into public relations efforts over the Internet, many universities fail to take full advantage of this dialogue concept, as evidenced by the feedback received in only 16% of tweets. Dialogic feedback appeared in tweets that republish an original feed published by another individual or organization, while not appearing in tweets aimed at asking a question or a direct or indirect response to a question. Hence, the universities failed to employ the principle of highly interactive feedback.

5.4 Public relations models that have emerged in university tweets

Table (5) shows the differences in the dialogic capabilities of universities via Twitter according to the type of university

Dialogic features	University	No	Mean rank	Chi-Square	FD	sig
Useful information	King Faisal University	140	152.73	14.809	2	.001
	Alfaisal University	76	159.18			
	King Abel-Aziz University	108	177.50			
	Total	324				
Preservation of visitors	King Faisal University	140	175.27	103.969	2	.000
	Alfaisal University	76	83.55			
	King Abel-Aziz University	108	201.50			
	Total	324				
Generation of return visitors	King Faisal University	140	152.70	28.562	2	.000
	Alfaisal University	76	136.50			
	King Abel-Aziz University	108	193.50			
	Total	324				
Dialogic feedbacks	King Faisal University	140	157.33	7.744	2	.021
	Alfaisal University	76	179.13			
	King Abel-Aziz University	108	157.50			
	Total	324				

The results of the study revealed that the four models of public relations were not represented in the Saudi universities 'Twitter. The two-way balanced communication model in the Saudi universities' Twitter was only 0.6%, although it was the most accepted public relations model

1. *Press Agency/Publicity*: The press agency/Publicity model was the most public relations model visible in Saudi universities' tweets, where it appeared in 29% of the tweets. In addition, the model was evident in the tweets that used the language of persuasive propaganda or words that express emotions, to describe or promote an event/program, or completion, with the lack of responses from the university. It also appeared in the tweets trying to convince observers to work in a way beneficial to the university, such as the presence of any of the university events or programs as Occupation Day in King Faisal University, or support any of the issues as donation campaigns with blood and the World Day for Orphans at the University of Alfaisal. While the model did not appear in Tweets using symbols and shapes that express feelings.

2. *Public information*: Of the 324 tweets, 90 tweets at 27.8% are consistent with the public information model. The public relations information model appears in tweets containing updates and announcements about the organization or other organizations without the use of persuasive and biased language or emoticons and emoticons. Tweets contain facts only, through direct and objective language that focuses on information that would benefit the public, such as match results, current events, updates, and special announcements.

3. *A Two-Way Asymmetric Communication*: The two-way asymmetric communication model came in the third rank at 4.3% and appeared in tweets asking for specific reactions such as participation in the event, visiting its pavilion, or asking the target audience to become more involved with the university using social networks.

4. *Two-way symmetric Communication*: This model was absent and showed only a negligible percentage (0.6%) in Twitter to King Abdul Aziz University in which it responded to inquiries from some students. This absence confirms that Saudi universities use Twitter as a one-way communication tool and do not use it to develop major relationships with the public through balanced two-way communication. When universities publish a tweet, they do not follow the tweets of others and thus contribute without knowing the failure of two-way communication.

5.5 The target Audience

Table (6) the target Audience

The target Audience	N	%
Students	92	28.4
Teaching Staff & Employees	30	9.3
The Public	202	62.3
Total	324	100

The main audience of the organization is essential in determining the nature of the electronic relationship that the organization tries to build. Public relations are more effectively achieved if practitioners largely identify the main audience. The type of public relations used in higher education is usually based on the target audience. The public was the most targeted group in the tweets of Saudi universities via Twitter with 62.3% followed by students and finally the employees and the teaching staff of Saudi universities. This finding differs from the McAllister and Taylor (2007) study that analyzed the content of the New Jersey Community College. She revealed that the students are the most targeted, perhaps because universities address a broader audience than colleges, which address their students directly.

5.6   Types of messages usually published by universities

Table (7) shows the Topic of the message

The topic of the message	N	%	Average
News	176	54.4	
Self-promotion	86	26.5	
External Promotion	38	11.7	
Question to followers	2	.6	1.9198
Respond to a question	0	0	
Opinions / Complaints	4	1.2	
Random data or ideas	18	5.6	
Total	324	100	

Twitter has gained widespread popularity in Saudi Arabia as it allows users to send messages consisting of 140 characters, along with photos, videos, and links, to thousands of people simultaneously, providing insight into the overall effectiveness of social media. A study examining the use of Twitter by Saudi universities found that news dissemination was the primary goal, accounting for 54.3% of tweets, followed by self-promotion or announcements (26.5%), external promotion (11.7%), and publication of random data or general ideas (5.6%).

The study found that the "Opinions/Complaints" and "Question to Followers" categories had low ratios, indicating poor interaction with the public and a lack of utilization of Twitter's interactive capabilities. This suggests a need for public relations agencies in universities to review their communication strategies and goals to engage with the public in two-way symmetrical digital relations. This finding is consistent with the analysis of interaction features and models of public relations used in the study.

The study also noted that universities did not allow others to post or tweet on their accounts, likely to avoid offensive content from irresponsible individuals. In summary, while Saudi universities use Twitter primarily for news dissemination, there is a need to improve interaction with the public and leverage the interactive capabilities of the platform to engage in two-way symmetrical digital relations.

.3.7 Hypotheses Testing

H$_1$: There are differences in the dialogic capabilities of universities via Twitter depending on the Level of interactivity.

The study found the validity of the previous hypothesis for all the features of the dialogue. Upon the Cruskal-Wallis Test shown in the above table, it is clear that:

- There are significant differences in the application of the principle of the usefulness of information according to the levels of interaction with the value of Chi-Square 11.950 at the level of .003. Where useful information was more prominent in low interaction followed by high interaction and finally intermediate interaction.
- There are significant differences in the application of the principle of conservation of return visitors according to levels of interaction with the value of Chi-Square 62.960 at the level of .000. Where the application of the principle of maintaining visitors at the level of the average interaction followed by the high and finally low.
- There were significant differences in the application of the principle of generation of return visitors according to levels of interaction with the value of Chi-Square 35.535 at the level of .000. The application of the principle of generation of return visitors has emerged at the level of intermediate interaction followed by the high and low end.
- There were significant differences in the application of the principle of dialogic feedback according to levels of interaction, where the value of Chi-Square 308.379 at the level of .000. Where the application of the principle of dialogic feedback emerged at the high interaction level followed by the medium and finally the low.

Table (8) shows the differences in the dialogic capabilities of universities via Twitter depending on the Level of interactivity

Dialogic Features	Level of interactivity	No	Mean rank	Chi-Square	FD	Sig
useful information	Low	62	180.50			
	Medium	210	155.81	11.950	2	.003
	High	52	168.04			
	Total	324				
Conservation of return visitors	Low	62	113.53			
	medium	210	188.39	62.960	2	.000
	High	52	116.35			
	Total	324				
Generation of Return Visitors	Low	62	118.21			
	medium	210	180.47	35.535	2	.000
	High	52	142.73			
	Total	324				
Dialogic Feedbacks	Low	62	136.50			
	medium	210	137.27	308.379	2	.000
	High	52	295.38			
	Total	324				

H$_2$: There are differences in the dialogic capabilities of universities via Twitter depending on the type of university.

Table (9) shows the differences in the dialogic capabilities of universities via Twitter depending on the type of university

Dialogic Features	University	No	Mean rank	Chi-Square	FD	Sig
useful information	King Faisal University	140	152.73			
	Alfaisal University	76	159.18	14.809	2	.001
	King Abel-Aziz University	108	177.50			
	Total	324				
Conservation of return visitors	King Faisal University	140	175.27			
	Alfaisal University	76	83.55	103.969	2	.000
	King Abel-Aziz University	108	201.50			
	Total	324				
Generation of Return Visitors	King Faisal University	140	152.70			
	Alfaisal University	76	136.50	28.562	2	.000
	King Abel-Aziz University	108	193.50			
	Total	324				
Dialogic Feedbacks	King Faisal University	140	157.33			
	Alfaisal University	76	179.13	7.744	2	.021
	King Abel-Aziz University	108	157.50			
	Total	324				

The study found the validity of the previous hypothesis for all the features of the dialogue. Using the Cruskal-Wallis test and looking at the previous table shows the following:

- There are significant differences between the universities in terms of the application of the principle of useful

information, where the value of Chi-Square is 14.809 at the level of .001. The University of King Abdul Aziz came first in providing useful information followed by the University of Faisal and then King Faisal University.

- There are significant differences between the universities in the application of the principle of conservation of return visitors with the value of Chi-Square 103,969 at the level of .000. King Abdel-Aziz University was the most encouraged to return to visit, followed by King Faisal University and finally Al-Faisal University.
- There are significant differences between the universities regarding the application of the principle of generating return visitors where the value of Chi-Square is 28.562 at the level of .000. King Abdel-Aziz University was the most sought to maintain visitors followed by King Faisal University and finally Al-Faisal University.
- There are significant differences between the universities in the application of the principle of feedback dialogue, where the value of Chi-Square is 7.744 at the level of .211. The reactions were more applied dialogue at the University of Faisal followed by King Abdul Aziz University and then King Faisal University.

H₃: There are differences in the emergence of public relations models across university accounts on Twitter depending on the type of university.

Table (10) shows differences in university application of PR models according to the type of university

Grunig and Hunt models	University	N	Mean rank	Chi-Square	FD	sig
Press Agency/Publicity	King Faisal University	140	152.53	26.995	2	000.
	Alfaisal University	76	200.76			
	King Abel-Aziz University	108	148.50			
	Total	324				
General information	King Faisal University	140	170.47	31.639	2	000.
	Alfaisal University	76	122.24			
	King Abel-Aziz University	108	180.50			
	Total	324				
Two-way Asymmetric Communication	King Faisal University	140	164.76	1.278	2	000.
	Alfaisal University	76	159.76			
	King Abel-Aziz University	108	161.50			
	Total	324				
Two-way symmetric Communication	King Faisal University	140	162.50	.000	2	1.000
	Alfaisal University	76	162.50			
	King Abel-Aziz University	108	162.50			
	Total	324	152.53			

The study found that there were differences between universities in applying the following communication models: "Press Agency / Publicity, Two-way Asymmetric Communication ", while there were no differences between universities in applying the Two-way symmetric Communication model. Given the previous table, it is clear that:

- There are significant differences between the universities in applying the model of the press agency / publicity with the value of Chi-Square 26.995 at the level of .000. Al-Faisal University was more applicable to the press agency model followed by King Faisal University and King Abdel-Aziz University.
- There are significant differences between the universities in the application of the public information model with the value of Chi-Square 31.639 at the level of .000. King Abdul Aziz University was the most applied to the public information model followed by King Faisal University and Al Faisal University.
- There are significant differences between the universities regarding the application of the two-way asymmetric communication model, with the value of Chi-Square 1.278 at the level of .000. King Faisal University was the most

applied to the Two-way symmetric communication model, followed by King Abdel-Aziz University and Al Faisal University.

- There were no significant differences between the universities in the application of the two-way symmetric communication model, with the value of Chi-Square .000 at the level of 1,000.
- There are differences in the application of universities to Public relations models through their Twitter accounts depending on the levels of interactivity.

Table (11) shows the differences in the application of universities to public relations models depending on levels of interactivity

Grunig and Hunt Models	levels of interactivity	N	Mean rank	Chi-Square	FD	Sig
Press agency/Publicity	Low	62	167.76	2.942	2	.230
	Medium	210	164.87			
	High	52	146.65			
	Total	324				
Public information	Low	62	150.02	13.014	2	001.
	medium	210	158.13			
	High	52	195.04			
	Total	324				
Two-way Asymmetric Communication	Low	62	171.18	6.763	2	034.
	medium	210	161.67			
	High	52	155.50			
	Total	324				
Two-way symmetric Communication	Low	62	161.50	10.494	2	.005
	medium	210	161.50			
	High	52	167.73			
	Total	324				

The study found that there are differences in the application of the following communication models: "public information, two-way asymmetric communication, Two-way symmetric communication " according to the level of interaction, while no differences were found in the application of the press / publicity model. For the level of interaction, the Cruskal-Wallis Test, given the previous table, shows the following:

- There were no significant differences between the universities in the application of the press / publicity model according to the level of interaction with the value of Chi-Square at the level of .230.
- There are significant differences between the universities in the application of the public information model according to the level of interaction, where the value of Chi-Square at the level of .001. The application of the model was associated with the level of high interaction followed by the medium and finally low.
- There were significant differences between the universities in the application of the two-way asymmetric communication model according to the level of interaction. The value of Chi-Square was 0.34. The application of the model was associated with the low reaction level and the average followed by the high.
- There were significant differences between the universities in the application of the two-way symmetric communication model according to the level of interaction. The value of Chi-Square was at the level of .0058. The application of the model was associated with the high reaction level followed by the low and medium levels.

6.   Conclusions

The use of social media platforms has gained significant importance in the field of public relations, particularly in engaging with the public and building relationships. In this context, the present study analyzed the Twitter activity of Saudi government and private universities, ranked by Times in 2021, as the best Saudi universities (King Abdul Aziz and Al Faisal National University), as well as, the universities listed on the list of the best Saudi universities influence on Twitter (King Faisal University).

The study was based on the idea that practitioners strive for two-way interactive dialogue and communication as part of their public relations efforts. The results suggest that universities do not follow the schemes developed by Kent and Taylor (1998) and Grunig and Hunt (1984) to incorporate dialogue and two-way public relations models into their efforts. Universities do not fully embrace the idea of integrating dialogue capabilities and two-way communication features in their Twitter activity, regardless of whether it was one of the best or most influential universities through social media, governmental or non-governmental (private). The study found that three dialogue principles were adopted and the fourth interactive model was ignored. Additionally, Grong's first three models were implemented, and the fourth model was overlooked, specifically with respect to the variables "response, question to followers, feedback loop, two-way asymmetric communication, two-way symmetric communication".

According to the analysis, the two-way asymmetric communication was applied only to 0.6% of the tweets; two-way symmetric communication was applied to 4.3% of the tweets. Dialogic feedback loops appeared only on 16% of the tweets. Public comments and queries were only answered at 0.4%. Hence, the study concludes that being on Twitter is not enough, as the effectiveness and strategy of using it to engage the audience plays a crucial role in reaping rewards (Alrwais et al., 2022).

Previous studies have also suggested that practitioners do not use social media to promote dialogue in the way scientists hope (Ao & Huang, 2019; Wang & Yang, 2019; Rybalko & Seltzer, 2010; Waters & Jamal, 2018; Waters & Williams, 2017; Linvill, McGee, & Hicks, 2012; Lovejoy, Waters, & Saxton, 2012). However, this research proves that Twitter has become an interactive resource for universities looking forward to engaging and building relationships with the technology-consuming public. The results revealed that each variable was present at least once in some tweets, which confirms that universities employ Twitter for different reasons and in different ways, which is not necessarily a bad thing. Nevertheless, based on the belief that public relations have evolved into an industry that focuses more and more on two-way communication practices, the results confirm that universities may be mistaken in not using Twitter strategically in a way that benefits them from its multi-directional communication capabilities (Alrwais et al., 2022).

Overall, the study suggests that universities should prioritize the principles of dialogue and two-way communication models developed by Kent and Taylor (1998) and Grunig and Hunt (1984) in their public relations efforts. Along with this, universities need to focus on using Twitter effectively to engage their audience by applying the variables of response, question to followers, feedback loop, two-way asymmetric communication, and two-way symmetric communication strategically. This approach would help universities to build and maintain a positive relationship with their audience on social media platforms.

Recommendations

Based on the analysis of Saudi universities' Twitter activity, the following recommendations are suggested:

- Embrace the principles of dialogue and two-way communication models developed by Kent and Taylor (1998) and Grunig and Hunt (1984) in public relations efforts.
- Integrate dialogue capabilities and two-way communication features in Twitter activity.
- Prioritize the variables "response, question to followers, feedback loop, two-way asymmetric communication, two-way symmetric communication."
- Apply these principles strategically to engage and build relationships with the technology-consuming public.
- Recognize that public relations has evolved into an industry that increasingly focuses on two-way communication

practices.

- Do not solely rely on being present on Twitter, but focus on using it effectively to engage the audience and reap the rewards of its multi-directional communication capabilities.
- Conduct more research on the effectiveness of social media use in promoting dialogue and two-way communication in the public relations industry.

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