

Systematic review of university public relations communication strategies: 2010–2022

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ABSTRACT

Background: Global South colleges employ public relations differently. This gap must be researched to improve these institutions' reputations. This paper maps and analyzes university public relations research and evaluates science communication framework integration. **Method:** A comprehensive literature study of four main public relations journals examined publication frequency on public relations, universities, higher education, and colleges during the past 12 years. **Results:** Public relations research has increased, although university-related studies are scarce. Only twenty-one articles explored this sector, mostly by US scholars focusing on crisis communication. These findings reveal higher education institutions' communication dynamics and goals when analyzed organizationally and systemically. This report discusses university branding, digital communication methods, and stakeholder participation. It also reveals temporal patterns, such as communication practice changes over time, and university communication components like crisis management and community engagement. These factors depart from public relations research's corporate and governmental focus. **Conclusion:** University-specific public relations literature is lacking due to crisis communication studies and US-based authors. This emphasizes the need for further research, particularly the incorporation of the science communication framework, which is essential for understanding how higher education institutions communicate with the public on scientific matters. **Implications:** This study suggests universities use communication tactics that differ from commercial and government public relations studies.

Keywords: Public relations; university; adaptive communication; systematic review; public relations research

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INTRODUCTION

For four decades, there has been a decline in public trust in higher education institutions. As a result, the public, media, and government are calling for open access to information, quality, and constructive governance of the higher education communication system (Campbell, 1990). It is important for higher education institutions to improve strategies in communicating the vision, success stories, culture, and symbols of the organization, either directly or via media, so they are known to the public (Callan & Immerwahr, 2008; Lederman & Lederman, 2017).

Public relations play a crucial role in higher education organizations, yet they are often overlooked. Public relations not only select information to function well but also need to understand the strategic direction of the organization. In universities, it is an organizational public communication system that determines the reputation of higher education (Majid et al., 2024).

Research on university public relations (UPR) is significant because it significantly shapes institutional reputation, enhances stakeholder engagement, and fosters effective communication strategies within academic environments. As universities face increasing competition and scrutiny, understanding the

dynamics of PR can help institutions effectively convey their values, achievements, and contributions to society. Investigating this field is worthwhile as it addresses unique challenges faced by higher education institutions.

Public relations practices in higher education institutions increasingly communicate science (Volk et al., 2023; (Autzen & Weitkamp, 2019). Besides educational institutions, universities are scientific organizations that carry out public communication functions to disseminate information and scientific discourse to build public perception and knowledge of science and its benefits. At the same time, universities must improve their reputation through various communication and media activities.

Many universities then set up dedicated PR units or broader strategic communications units. This encourages comprehensive and intense PR or strategic communication practices by these science organizations. On the other hand, PR research has so far been dominated by cases in companies or government organizations (Capriotti & Zeler, 2023). However, a study by Nutsugah & Anani-Bossman (2023) in Ghana found that educational institutions are a popular case of PR research besides the financial industry in the country. This article examines the portrait or landscape of PR research with universities as cases in leading PR and communication strategy

journals. This is necessary to understand as it can help develop a future research agenda regarding public relations and science communication.

Many organizations, including higher education institutions, consider the PR function crucial due to changes in the complex communication environment after the second decade of this millennium. The existence of the digital world and the diversity of communication channels means that organizations face varied audiences and complex communication problems. The relationship between organizations (including universities) and their publics differs significantly from the era before this information disruption when the contemporary public became very active and sensitive to what organizations were doing. It is due to a combination of internal and external factors. Internally, their missions, resources, and governance structures shape educational quality and focus. Externally, market demand, regulatory environments, and cultural contexts influence program offerings and community engagement.

Universities, as educational institutions and scientific organizations, have very different characteristics from other organizations. From a systems perspective, universities are a structural coupling between science and education systems (Sakai, 2024). As a science organization, one of the university's main tasks

is related to public understanding of science, which is more broadly related to science communication. On the one hand, universities, especially private universities, have "hybrid" characteristics as social institutions and business (corporate) entities. However, what are university PR practices like these days? Are they no different from PR practices in companies and government institutions? One of the efforts to answer this question can start by reviewing PR research with universities as the object or the case in peer-reviewed journals. It is also helpful to know in more detail about the most popular approach choices, the more frequently used methods, and the findings that stand out in research on that topic. Identifying existing research gaps related to PR, universities, and communicating science is also the motive or aim of this article.

Research on PR has experienced significant growth in recent years yet it continues to face the challenge of thoroughly examining its structural dynamics and evolutionary trajectory (Thelen, 2021; Ki et al., 2021). To advance the field, it is crucial to investigate various dimensions, including the flow of knowledge, the expansion of literature, theoretical advancements, and potential future directions. This exploration is essential not only in general terms but also within specific contexts, such as the intersection of PR and science communication (Wang et al.,

2021).

In particular, the relationship between PR and higher education presents a unique opportunity to enrich the existing literature landscape. By mapping public relations research that focuses on university or higher education topics, this article illuminates the distinctive characteristics and trends within this niche. Such mapping will help identify gaps in knowledge and highlight areas that require further exploration (Majid et al., 2025). Additionally, it exposes theoretical frameworks employed in this area, particularly how science communication principles are integrated into PR strategies by universities. This investigation enhances the academic discourse surrounding PR and provides practical insights for higher education institutions seeking to improve their communication practices in the complex and interconnected world. Studies on PR are evolving rapidly, with numerous researchers mapping the landscape of the field. Key contributions have come from scholars such as who have provided foundational insights into the discipline's development (Ki et al., 2021). More recent studies by Andersson (2024), have further explored specific trends and challenges within PR. The work of Wang and Volk highlights the increasing complexity of PR in response to evolving communication technologies and societal shifts (Wang et al.,

2021; Volk et al., 2023). Thelen and Widiyanto have examined the implications of these changes (Thelen, 2021; Widiyanto et al., 2024), while Alhayat (2024) continue to push the boundaries of PR research. As a dynamic field, PR faces practical and theoretical challenges from internal organizational factors and external influences, including rapid technological advancements and global social changes. These challenges necessitate ongoing research to adapt PR strategies effectively and address the unique demands of contemporary communication landscapes. Topics related to PR and digital technology have become one of the popular topics and have attracted a lot of attention among scholars recently (Weder & Weaver, 2025). According to Ao & Huang, (2020) there are three trends in PR research in the literature map: (a) citation analysis, (b) analysis of overall public relations research studies, and (c) analysis of a particular topic. Meanwhile, the findings of Alhayat show that 9 clusters developed in PR research throughout 2010-2020, which are strategic management being the most dominant cluster and the most popular cluster for interacting with other research traditions, public relations professionalism, digital media, crisis communication, global public relations, rhetoric and philosophy, media relations, and critical studies (Alhayat et al., 2024). Therefore, an "alternative" perspective in PR research is

essential to pursue, as previously expressed (Condit, 2018). Extensive research by Ki (2021) through bibliometric analysis of public relations publications from 1983 to 2019 shows how this field has evolved. The main finding is that the growth and popularity of global public relations in scholarships are steady. More remarkably, articles and citations have exploded since 2010. In a more specific aspect related to authorship, North American/western countries/global north scholars still dominate PR literature (Macnamara, 2021). Requiring emergency management by health authorities and providers, it created flow-on crises and “crisis contagion” for organizations ranging from international airlines and tourism operators to local businesses, schools, and universities. In addition to the risks directly associated with the health emergency, many organizations were plunged into crisis because of severe restrictions to their operations and income losses. This analysis examines crisis communication in an organization faced with major financial losses, staff redundancies, and disruption. It analyses how these and necessary crisis responses were communicated to stakeholders, using situational crisis communication theory (SCCT; (Wang et al., 2021). The research shows that the important and most frequently referred authors in PR research are those who come from or are affiliated with institutions from Western

countries. However, Xu and Huang show that PR articles in the Asian context published during 1994-2014 were still dominated by authors affiliated with Asian institutions ($n = 86, 53.1\%$), followed by U.S. institutions ($n = 69, 42.6\%$) (Xu & Huang, 2016).

In research by Wang (2021) the three outstanding theories are excellence theory/symmetrical communication. Grunig’s models of public relations practice, cultural/critical perspective, and organization-public relationship or relationship management. This aligns with an article by Ihlen that Two-way symmetrical communication is the dominant theoretical paradigm (Ihlen, 2020). Meanwhile, Xu and Huang (2016) found that there were seven most frequently used theories in public relations research in Asia between 1995 and 2014: four models of PR, framing, relationship management, the contingency theory of accommodation, Hofstede’s cultural dimensions, situational crisis communication theory, and the excellence theory. Concerning social media, the dominant theories in PR research are dialogic theory, situational crisis communication theory, uses and gratifications, and excellence theory (VanDyke & Lee, 2020).

In the methodological aspect, Wang et al. (2021) suggested that the two most popular methods are surveys and content analysis. This is in line with the findings of Khang (2012) that

content analysis and surveys are the most popular procedures. Meanwhile, Huang et al. (2017) found that a quantitative methods approach dominates Asian PR research. A different picture is demonstrated by Dong et al. (2023), that research on government public relations (GPR) is dominated by qualitative research. Also, Chen (2020) show PR research in two leading journals, namely *Journal of Public Relations Research* and *The Public Relations Review* during the period 1975-2013 was dominated by qualitative research. Researchers also show mixed methods development in PR research as trends like this are developing more generally in the context of communication science and social science. The presence and increasingly widespread use of digital media or technology has also encouraged the development of PR research methodology (Wang et al., 2021).

The general overview of the PR research map above shows that PR research is increasing. Still, there is dominance, or perhaps it could be called stagnation, at specific points in aspects of authorship, methods, and the theories/concepts used. What about the special conditions of the PR research map in the case of universities and related to adaptive communication strategy? From the initial study that we carried out directly on publication databases and several leading journals, it seems that no research has systematically mapped the condition of

PR research with cases or focuses on higher education institutions such as universities and in broader relation to science communication.

Efforts have been made to identify research gaps in university public relations, such as the predominance of studies conducted in Western contexts. However, the discussions often lack depth. Many existing studies rely on Western-centric theories that may not apply to diverse global environments, limiting the understanding of how cultural, social, and political factors influence PR practices in non-Western universities (Anani-Bossman & Bruce, 2022). Additionally, a significant portion of research employs quantitative methods that overlook the qualitative aspects of university PR, and there is a scarcity of longitudinal studies that could shed light on the evolving nature of these strategies (VanDyke & Lee, 2020).

Moreover, current research frequently neglects the unique challenges faced by universities in different regions, including variations in funding, governance structures, and public perceptions (Brown, 2019). This contextual oversight leads to a one-size-fits-all approach that may not effectively address the specific needs of institutions outside the West. By thoroughly examining these theoretical, methodological, and contextual limitations, future research can provide a comprehensive understanding of university PR (Knight &

Sweetser, 2021)

The field of public relations studies, particularly concerning university cases, is beginning to gain traction, as evidenced by recent findings in the Ghanaian context (Anani-Bossman & Tella, 2022). However, a comprehensive examination on a global scale is essential to understand the broad implications and variations within this niche. It raises critical questions about whether the trends observed in PR research focused on universities align with or diverge from the general landscape of public relations scholarship. The issue of university public relations remains critically under-researched, despite its growing importance in enhancing institutional reputation and stakeholder engagement. This lack of focused research hinders universities from effectively navigating the challenges of communication in a competitive landscape. Therefore, it is urgent to investigate the unique dynamics of university PR to develop strategies that address these challenges and improve institutional effectiveness. To explore this further, this article poses three key research questions.

RQ1 seeks to identify the general trends in research on public relations and university topics from 2010 to 2022 within prominent PR journals. This question aims to establish a timeline and contextual understanding of how university-related PR research has evolved over

the years.

RQ2 focuses on the profile of authorship, including the backgrounds of researchers, the methodologies employed, and the specific topics, theories, and concepts that are prevalent in PR and university research. Understanding these elements could provide insight into the diversity and depth of scholarship in this area. RQ3 investigates the extent to which science communication is utilized as a framework in PR research for universities and higher education institutions. This is relevant as universities increasingly engage with the public on scientific issues, necessitating a clear understanding of their communication strategies. Together, these questions could create a nuanced portrait of public relations research in higher education.

RESEARCH METHOD

To effectively map and understand a topic within the literature landscape, various methods can be employed, with systematic reviews being a prominent choice (Victor, 2008; Volk, 2016; Xiao & Watson, 2019; Kim, 2020). According to Xiao and Wang (2021) reviewing relevant literature allows for a comprehensive understanding of the existing body of work and helps identify research gaps. The systematic review method offers several advantages. It could provide a thorough and balanced overview

of the current state of knowledge through a clear and transparent methodology. This article utilized a systematic review to address specific research questions and achieve established objectives. To ensure rigor, the research process included several stages: selecting appropriate journals, defining search keywords, determining the review period, categorizing literature types, collecting data, applying exclusion criteria, and conducting coding, extraction, and analysis.

The articles were collected from public relations and strategic communication journals. Journal identification was performed by searching the Scimago database and entering the keyword “public relations.” With the keyword, 14 names of journals appeared, which were then filtered under their aim and scope as well as their ranking (Q1 and Q2). Four journals were then selected to be data sources: Public Relations Review, Journal of Public Relations Research, and Public Relations Inquiry.

We also included one leading journal in strategic communication, *the International Journal of Strategic Communication*, which published many public relations articles. The publication period for the articles collected is 2010-2022. This duration was selected because, in this decade, the communication environment had become complex due to the expanding digital landscape, which significantly influenced public perception and affected the credibility of

institutions. Digital media changes how they communicate and engage with people. Policy changes impact funding and governance, which shape educational and research priorities. Apart from that, Ihlen and Raknes; Ki & Ye (2020; 2017) stated that the number of articles and citations of PR has exploded since 2010.

Data collection was carried out by browsing the journal website pages mentioned above. Searches were carried out manually and automatically on the pages/websites of each journal. For this purpose, several keywords were used as a guide, which were “university,” “higher education,” and “college.” In the initial stage, these keywords were entered into the search facility on the pages of each journal to see a general portrait. The next is a manual search for each edition of the publication using the keywords above as a guide to search for the title and abstract of the article. The types of publications collected were only research articles and excluded book reviews, editorials, policy discussions, and commentaries. In the *Public Relations Review*, data were also taken from the Research in Brief section and Full-Length Articles. Two researchers collected data to ensure minimal or no missed data or articles. The search results of the two researchers were matched and rechecked against the journal source if there were differences. Articles related to public relations education or pedagogy in

universities or higher education were not the object of this study.

Data was coded and analyzed based on the following categories: general trend, authorship, method, topic, and theory/concept. General trends include describing the number of articles published yearly and by journal name. Furthermore, authorship consists of the author's name, affiliation, and region. Then, the method is coded based on the approach (qualitative, quantitative, mixed-method) and procedure (survey, interview, content analysis, experiment, focus group, case study, ethnography, etc.). Meanwhile, topics were identified deductively in each journal article by reviewing the title, keywords, and abstract. Theories identified in each piece could consist of a single theory or multiple theories. In addition, tracking the keyword "science communication" or anything relevant to this in the articles collected was also carried out to answer the third research question (RQ 3).

Focusing solely on Q1 and Q2 journals related to public relations, while often associated with higher quality, risks narrowing the scope of the review and overlooking valuable insights found in reputable but lower-ranked journals. These journals can offer unique perspectives relevant to university public relations (UPR). Although this limitation could make the analysis more specific by prioritizing only top-tier

journals, it is essential to advocate for a broader search strategy that includes diverse sources. Such an inclusive approach could enhance the comprehensiveness of the review.

RESULTS AND DISCUSSION

Science communication is a field that is considered increasingly important in the situation of contemporary society, which is facing various complex social problems, the threat of the climate crisis, the declining quality of democracy, phenomena such as the death of expertise and the spread of misinformation, and in general the broad impact of the development of digital technology (Siregar et al., 2021). Science communication has several explanations from diverse perspectives and has experienced developments ranging from the deficit model to science communication in context (Leßmöllmann, 2019); (Schäfer & Fährlich, 2020).

In an organizational context, particularly within universities, science communication could promote public understanding based on research activities and outputs (Schäfer & Fährlich, 2020). The relationship between universities and the public can be framed within the context of public relations and science communication. VanDyke & Lee (2020) note that these fields have evolved in ways that

overlap and complement each other. Therefore, universities need to build relationships with their internal and external publics. Volk (2023) suggest that public relations in scientific organizations should focus on managing trust. Therefore, further exploration of the intersection between science communication and public relations in academic settings is essential to understand how these approaches are integrated in universities.

Author Profiles in Public Relations and University Research The concept of science communication is sometimes explained with terms such as “science popularization,” “public understanding,” “vulgarization,” “public understanding of science,” and the cultivation of a “scientific temper” “ (Schiele et al., 2021). According to Sakai (2024) science communication may be defined as the use of appropriate skills, media, activities, and dialogue to communicate about scientific research to the public to produce one or more of the following: awareness, enjoyment, interest, opinions, and/or understanding about science. Meanwhile, the National Academies of Sciences, Engineering, and Medicine stated that science communication is more complex than simply translating the jargon of science into language the public understands.

If science communication is understood in an organizational context, which, according

to Dunwoody (2021), is still insufficiently exposed and researched, it will be related to the role of universities as one of the primary forms of science organization. Universities are responsible for communicating science or encouraging public understanding of science based on the research activities and the outputs.

The relationship between universities and the public can be understood in conceptual and practical models. This relationship can be placed in the context of science communication and public relations in this article. This means that the university’s efforts to connect with the public for science communication purposes should ideally be discussed in a public relations frame. According to VanDyke & Lee (2020), public relations and science communication scholarship have evolved in ways that overlap, contrast, and complement. They then underline that as science becomes increasingly interdisciplinary, science public relations research should pay attention to this, for example, by investigating how organizations (e.g., universities) seek to build relationships with internal publics (e.g., faculties) in this regard.

Meanwhile, Volk (2023) show that the PR function for scientific organizations might usefully be thought of as managing the trust portfolio. They explained further that PR practices in science organizations are to cultivate

Table 1 Number of Articles in Four Journals for the 2010-2022

Journals	Total article	University PR- focus Journal
Public Relations Review	1,042	9
Journal of Public Relations Research	349	5
International Journal of Strategic Communication	239	3
Journal of Communication Management	205	4
Total	1,835	21

Source: Researchers' data, 2023

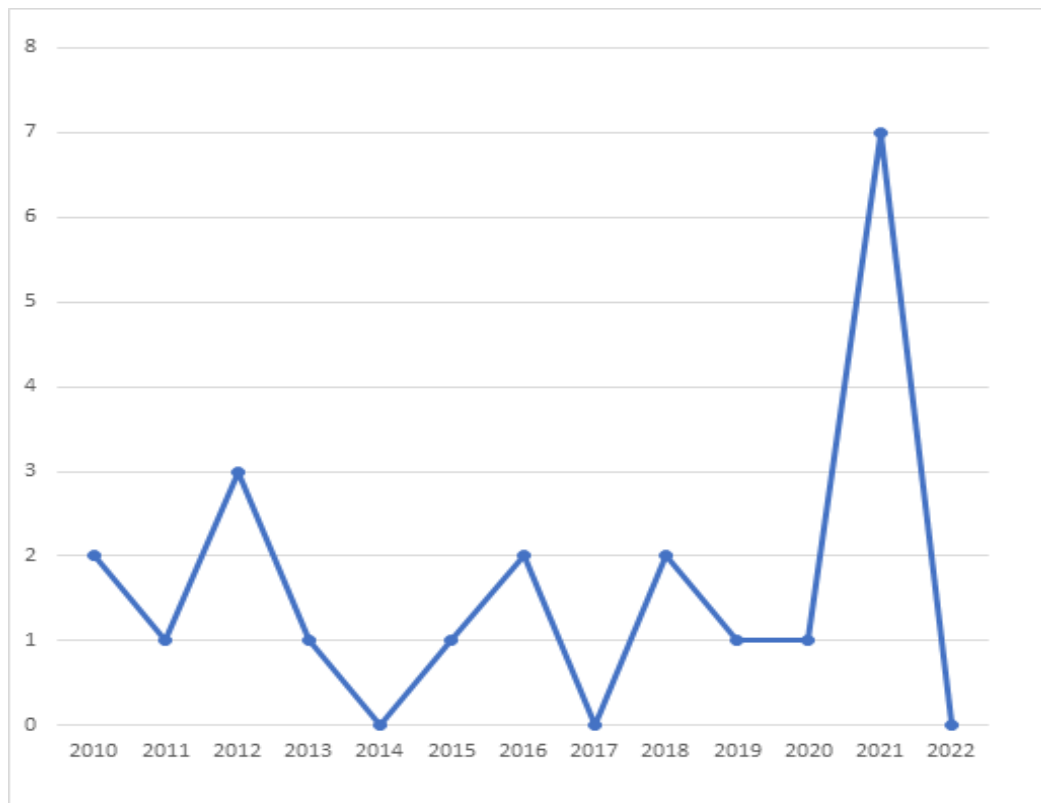
or maintain trust in the ability of the organization to do science, advocacy, or science policy. Science communication and PR, especially in the context of science organizations, or can be referred to as science public relations, need to be explored further (Autzen & Weitkamp, 2019; VanDyke & Lee, 2020). To find out to what extent the science communication approach appears or is used in public relations research in the case of science organizations such as universities, the following research questions were formulated:

Previous studies indicate that public relations (PR) research has significantly advanced in both quantity and quality worldwide. Research specifically focused on PR within universities and higher education institutions mirrors this growth, though at a slower pace compared to the broader PR landscape. The following table outlines the number of articles related to public relations in higher education published in four leading journals from 2010 to 2022. Notably, the Public Relations Review published the

most articles (14), while the Journal of Public Relations Research published the fewest (1). In total, 21 articles were published during this period, with 2021 seeing the highest output at 7 articles. This data highlights trends in PR research output, particularly concerning higher education contexts.

The data reveal that while the overall volume of public relations research published in these four journals increased substantially over 12 years, the number of articles specifically focused on the university or higher education context remained relatively low, accounting for only 21 out of the total 1,835 articles (Table 1).

This disparity suggests that the public relations research community has not given sufficient attention to understanding the unique communication dynamics and challenges faced by universities and other educational institutions, particularly regarding the science communication framework. The limited representation of university-focused studies underscores the need for further exploration and



Source: Researchers' data, 2023

Figure 1 Number of articles by year 2010-2022

expansion of this research area.

Most authors of the articles are from the USA or affiliated with American universities. Other contributors hail from Spain, Germany, Yemen, Australia, Egypt, Norway, and New Zealand, but no authors are affiliated with institutions in South America, Central America, or Africa. Thirteen articles are co-authored, while the remainder have single authors. Notably, only two articles feature authors from different countries. One example is “The Effect of Relationship Cultivation Strategies on Organizational Reputation in Conflict Zones: The Case of Yemeni Private Universities,” written by scholars from Egypt, Yemen, and the USA (Figure 1).

Analysis of the titles and abstracts reveals that crisis management is the primary focus, as illustrated in the Word Cloud. The articles examine two types of crises: “internal” crises and “external” crises that institutions respond to. This distinction highlights the multifaceted nature of crisis communication within the higher education context.

The analysis of the word cloud focuses on “crisis communication” within universities, highlighting key terms such as “crisis,” “communication,” “university,” and “public,” which reflect their significance in the related text. Other important words include “study,” “institutional,” “relations,” “reputation,” “engagement,” and “research.” From 2010 to



Source: Researchers' data, 2023

Figure 2 The Most Popular

2022, communication strategies in universities have evolved to prioritize stakeholder engagement. The rise of digital tools has enhanced visibility and real-time interaction, while effective crisis communication is crucial for maintaining reputation, and strong brand management attracts prospective students (Figure 2).

Science Communication in PR Research for Higher Education: Research communication is vital for disseminating findings to wider audiences, while integrated communication ensures consistency across channels. Establishing feedback mechanisms allows for

continuous improvement and responsiveness to stakeholder concerns. The word cloud emphasizes how higher education institutions manage communication and public image during crises. Smaller words, such as “case,” “media,” “social,” “analysis,” “management,” and “education,” reflect related themes. Word clouds effectively summarize key themes in texts, such as reports, articles, or research papers.

The two most prominent methods from the 21 articles are content analysis and case study, apart from survey, experimental, ethnography, and literature review or essay, which also appear

Table 2 Keywords Tracked in Title and Abstract

Keywords	Quantity
Crisis	49
Communication	36
Study	31
Public	26
University	26
Reputation	18
Relations	16
Management	14
Education	14

Source: Researchers' data, 2023

as method choices (Table 2). This method is divided into content analysis with quantitative and qualitative approaches. One of the methodologically exciting pieces is the article entitled *New Insights into Crisis Communication from an "Inside" Emic Perspective during COVID-19* by Macnamara (2021) requiring emergency management by health authorities and providers, it created flow-on crises and "crisis contagion" for organizations ranging from international airlines and tourism operators to local businesses, schools, and universities. In addition to the risks directly associated with the health emergency, many organizations were plunged into crisis because of severe restrictions to their operations and income losses. This analysis examines crisis communication in an organization faced with major financial losses, staff redundancies, and disruption. It analyses how these and necessary crisis responses were

communicated to stakeholders, using situational crisis communication theory SCCT, which uses ethnography and auto-ethnography.

Crisis communication, including crisis management, is the most frequently used theoretical framework, alongside concepts like dialogic theory, strategic communication, organizational reputation, image repair strategies, corporate social responsibility, and diffusion of innovations. Eight articles specifically utilize crisis communication as a central concept, reinforcing its prominence in the research. In contrast, a search for the keyword "science communication" in the abstracts of the 21 articles yielded no results, indicating that this framework was largely absent from the studies.

Public relations studies in higher education encompass various contexts, including the role of PR in universities, the relationship between institutions and their publics, and how PR conveys higher education's mission as a scientific development entity. This article aims to promote the significance of PR in universities, emphasizing its role in effectively communicating science while adhering to the core values of research and education (Majid et al., 2025).

Public relations journals feature current PR practices and their relevance in various contexts. Higher education PR should differ functionally from practices at other institutions

due to universities' unique roles as educational and scientific organizations. From a systems perspective, universities act as a structural link between the science and education systems. A key role of these institutions is to enhance public understanding of science, closely related to science communication. Notably, private universities often exhibit "hybrid" characteristics, operating as both social institutions and business entities.

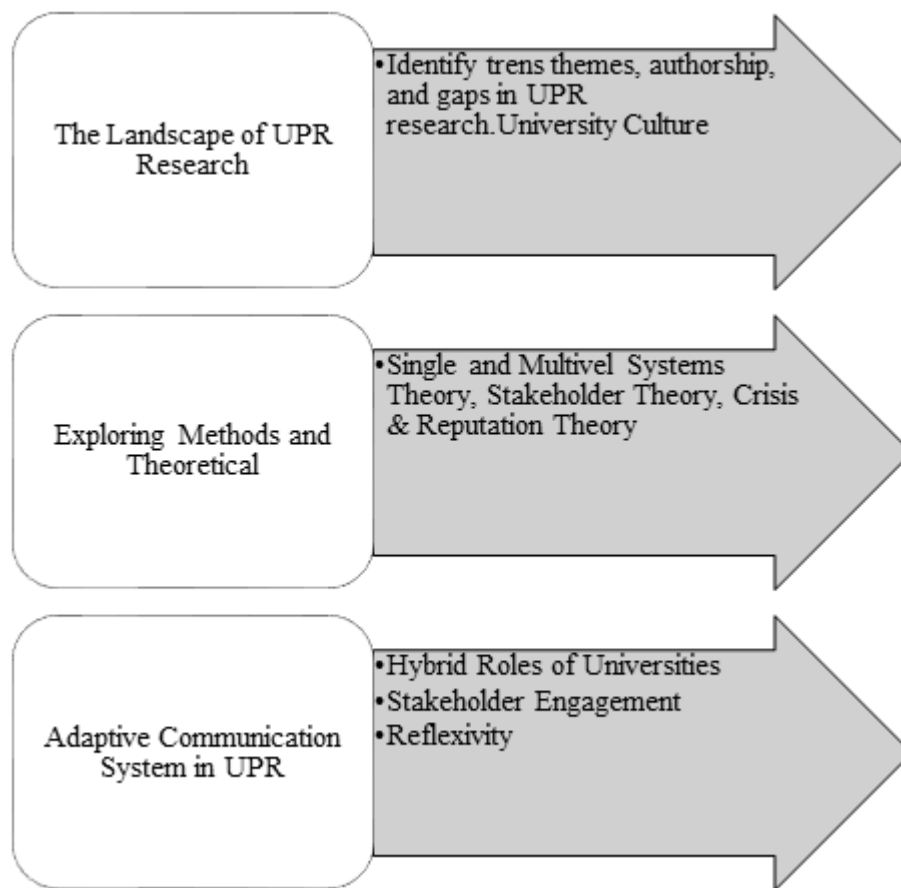
This raises important questions about contemporary university PR practices, whether they are fundamentally different from those used by corporate and governmental organizations. To explore this, a comprehensive review of peer-reviewed PR research focused on universities is essential. This analysis should examine prevalent approaches, common methodologies, and significant findings in the field. The key objective of this article is to identify research gaps related to PR, universities, and science communication.

The findings indicate that public relations (PR) studies, particularly regarding universities and higher education institutions, have not fully realized their scholarly potential. Analyzing published articles from 2010 to 2022 in four leading PR journals—Public Relations Review, Journal of Public Relations Research, Public Relations Inquiry, and International Journal of Strategic Communication—reveals a

concerning lack of focus on this critical area. This gap is ironic given the rapid global expansion of universities, where effective PR strategies are increasingly vital. As universities face challenges, such as competition and demands for transparency, effective communication is essential for building a reputation and engaging stakeholders. The limited research on PR in higher education represents a missed opportunity for scholars to enhance communication practices in this evolving landscape.

This underrepresentation in the literature raises concerns about the theoretical frameworks and methodologies used in PR research. It highlights the need for targeted studies that examine the unique communication dynamics and challenges faced by higher education institutions, along with innovative PR strategies to adapt to a changing global landscape. Addressing this gap will enrich academic discourse and provide practical insights, enabling universities to effectively leverage PR to achieve their goals.

The findings presented confirm several portraits or findings from previous studies regarding topic, method, and theory, although they are somewhat different (Figure 3). The dominance of US scholars is in line with findings in the context of public relations studies in general (Ki et al., 2021). At this point, efforts to enrich PR studies with the case of universities



Source: Researchers' data, 2023

Figure 3 The Mapping UPR

or higher education institutions need to be made by encouraging publications from scholars from other regions, such as Africa, Asia, and South America, for example, through special editions.

The dynamics of PR from universities or higher education institutions in these countries with different social and educational backgrounds will provide diverse and valuable perspectives for developing this discipline, both practically and academically. The fact that crisis is the primary concern of scholars in this topic shows findings that align with research Zhou (2019), that nine clusters were developed in PR research throughout 2010-2020, one of which

is crisis communication. This finding is also identical to the study by (Biesecker, 2019).

According to Martin, Bauer & Bucchi (2015), taking a broad approach to PR may also be useful rather than thinking of it as something that one unit in an organization does. In other words, PR studies need to be pushed from studies at the meso or organizational level to the macro level. The systems approach applied in PR studies is seen in Susanne Hölmstrom's article entitled Niklas Luhmann: Contingency, risk, trust and reflection. In this article, the author conveys two critical main ideas. First, Luhmann's autopoietic system theory enables

the identification of frames for understanding public relations in relation to society's overall coordination processes. Second, Luhmann's theory and analysis are central to public relations research and practice, given that public relations as a social practice is embedded in conflicts of legitimacy (Cross, 2002).

Hölmström employs Luhmann's autopoietic system theory, particularly the concept of "observation," to frame public relations (PR) as a referential system. He identifies two key values: self-reflection and inter-systemic relations, articulated through "reflexivity" and "reflection." Reflexivity suggests a monocontextual, narcissistic viewpoint, where organizations accept their self-perception as the sole reality, leading to conflicts with alternative worldviews (Hölmström, 2007). In contrast, reflection elevates understanding to a poly-contextual perspective. Hölmström positions PR within the horizontal logic of modern society, representing diverse public interests across various actors. Thus, PR serves to ensure temporal sustainability and enhance the value of responsibility in inter-systemic relations.

More specifically, studying public relations at universities or higher education institutions also allows us to see and understand the relationship between public relations as a specific system and science as a system. Science itself can be understood as "the pursuit and application of

knowledge and understanding of the natural and social world following a systematic methodology based on evidence" (VanDyke & Lee, 2020; Oeppen Hill, 2020). In Luhmann's system logic, science is a functionally differentiated subsystem of modern society that uses the communication medium (truth) for its reproduction and to construct and obtain new knowledge (Baraldi & Gavioli, 2021)

The scientific system distinguishes between truth and falsehood through theoretical and methodological approaches. As higher education embodies institutional science, public relations (PR) must align with the values of scientific development. PR's functional differentiation should enhance the system while reflecting its core characteristics. However, examining PR's role within the university system and its relationship to the scientific system necessitates a broader exploration than this article can provide. Understanding PR's position in these contexts requires more extensive analysis beyond the scope of this discussion.

Communication Strategies UPR to Improve Stakeholder Engagement and Reputation: Analyzing the theoretical frameworks related to adaptive communication in university public relations, crisis communication, especially crisis management, emerges as the most frequently utilized framework. Other theories, such as dialogic theory, strategic

communication, organizational reputation, image repair strategies, corporate social responsibility, and the diffusion of innovations, also feature prominently. Notably, eight articles specifically focus on crisis communication as a central framework. A search for “science communication” in the abstracts of 21 articles revealed that nearly all lacked this framework, which indicates a substantial gap in its application within university public relations research.

A comprehensive review study should not only advance theoretical frameworks but also offer practical insights for practitioners in the field of public relations (Eriksson, 2018; Wang et al., 2021). This article underscores the limitations of existing research on PR’s role in science communication, while highlighting its substantial potential for theoretical development. Investigating PR practices in higher education provides a unique opportunity to explore how distinct organizational characteristics can contribute to a nuanced theoretical understanding of adaptive system communication.

The systematic review of communication strategies in university public relations offers valuable insights for both practice and research. It identifies evidence-based strategies that enhance stakeholder engagement and improve institutional reputation, while underscoring

the need for training programs to equip PR professionals with modern skills. Tailoring communication plans to diverse stakeholder needs fosters stronger relationships, and effective crisis management is crucial for navigating higher education’s complexities. The review also highlights under-researched areas for future inquiry, such as the impact of emerging technologies on PR practices and the effectiveness of communication channels like podcasts and webinars. By advocating for interdisciplinary approaches, the review advances the understanding of public relations in higher education and guides future research efforts.

Table 3 presents the contributions of the systematic review. This study emphasizes the functional differentiation of PR roles across diverse contexts. It advocates for the ongoing evolution of PR research, encouraging scholars to transcend prevailing paradigms. The intricacies of modern society demand a

Table 3 Contribution of Study

Contribution
Evidence-Based Strategies
Professional Development
Crisis Management
Research Gaps Identification
Comparative Research
Interdisciplinary Approaches

Source: Researchers’ data, 2023

systemic approach to comprehend the dynamic relationships between organizations and their environments.

This study systematically identifies effective communication strategies that enhance stakeholder engagement and improve institutional reputation. It highlights the need for training programs designed to equip public relations professionals with contemporary skills and knowledge essential for navigating the evolving landscape of higher education. Additionally, the study stresses the necessity for robust crisis communication plans to effectively address the unique challenges faced by institutions.

Furthermore, the research encourages exploration of under-researched areas, particularly the impact of emerging technologies on public relations practices. It proposes a comparative analysis among different types of institutions to identify best practices tailored to specific contexts to foster an understanding of effective communication strategies. Finally, the study advocates for the integration of insights from various fields, which enhances the understanding of public relations in higher education and contributes to the advancement of the discipline.

CONCLUSION

Public relations studies in the context of higher education encompass various dimensions, including the role of PR in universities, the relationship between institutions and their publics, and the function of PR in communicating the core values of higher education as centers of scientific advancement. This article elevates the significance of PR within universities. It also examines how leading public relations journals depict current PR practices in higher education and the extent to which these issues are addressed. It is essential to recognize that the functional differentiation of PR in higher education should differ from practices in other sectors. By highlighting these distinctions, this article contributes to a deep understanding of how PR can be strategically employed to enhance the mission of universities as vital contributors to knowledge and societal development.

The systematic review presented several limitations that should be acknowledged when interpreting the findings. This study may have overlooked relevant studies published before this period or in other related fields, though the scope of the review provided a comprehensive overview of adaptive communication research in university public relations from 2010 to 2022. Also, the review was limited to only

English-language publications, potentially excluding important research conducted in other languages and restricting the generalizability of the results to non-English speaking contexts. The reliance on a select number of academic databases, despite their reputation, may have resulted in the exclusion of studies published in other outlets. Furthermore, the subjective nature of the screening and coding processes, although guided by a standardized protocol, could have been influenced by the researchers' own biases and perspectives. The heterogeneous nature of the included studies, in terms of their methodologies, research settings, and specific aspects of adaptive communication examined, made it challenging to draw definitive conclusions and generalize the findings across different university public relations contexts. The review also lacked an in-depth analysis that could have provided richer insight into the complexities of the adaptive communication strategies and their effectiveness.

Finally, given the rapidly evolving nature of public relations and university public relations, the landscape of adaptive communication practices and research may have changed or expanded since the latest studies included in the review. These limitations should be carefully considered when interpreting the findings of the systematic review and when designing future research in this area.

This article contributes to the field of university public relations by emphasizing the need for focused research in higher education institutions. It does not analyze existing literature on university PR or the communication functions of research organizations, yet it identifies these areas as crucial for future exploration.

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