

Analysis and Research on Enhancing WeChat Ecosystem Communication Effectiveness in Large Enterprises and Institutions via Big Data Technology: Postprint

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Date: 2023-10-08T00:00:00+00:00

Abstract

As media convergence continues to develop, interactivity and platformization have become key characteristics of the media convergence era. The advent of WeChat has profoundly transformed the communication and operational ecosystems across various industries, including large enterprises, media, entertainment, and e-commerce. The vigorous development of big data technology has simultaneously presented both opportunities and challenges for large enterprises and institutions to manage data resources more effectively and enhance internet-based operational effectiveness. In the “user-centric” mobile internet era, how to leverage big data methodologies to improve the communication effectiveness of WeChat ecosystems for large enterprises and institutions has become a research-worthy problem.

Full Text

Analysis and Research on Enhancing WeChat Ecosystem Communication Effectiveness for Large Enterprises and Institutions Through Big Data Technology

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Abstract: With the integrated development of media, interactivity and platformization have become defining characteristics of the media convergence era. The emergence of WeChat has profoundly transformed the communication and operational ecosystems of large enterprises, media, entertainment, e-commerce, and various other industries. Meanwhile, the vigorous development of big

data technology presents both opportunities and challenges for large enterprises and institutions to manage data resources more effectively and enhance their internet-based operations. In the “user-centric” mobile internet era, how to leverage big data methods to improve WeChat ecosystem communication effectiveness for large enterprises and institutions has become a significant research question.

Keywords: Big Data; “Mobile-First” Strategy; WeChat Ecosystem; User-Centric

Library Classification Number: G206.2

Document Identification Code: A

Article Number: 1671-0134(2021)04-049-03

DOI: 10.19483/j.cnki.11-4653/n.2021.04.010

Citation Format: Chen Zhi. Analysis and Research on Enhancing WeChat Ecosystem Communication Effectiveness for Large Enterprises and Institutions Through Big Data Technology [J]. China Media Technology, 2021(04):

1. WeChat as a Critical Entry Point for Enterprise Digital Operations

In recent years, Party and state leaders have attached great importance to the integrated development of all-media, emphasizing the need to adhere to a mobile-first strategy that enables mainstream media to leverage mobile communication and firmly occupy the commanding heights of public opinion guidance, thought leadership, cultural inheritance, and service to the people. This judgment is precisely based on the increasingly “socialized” characteristics of current media user behavior.

WeChat Official Accounts were launched in August 2012 as a new service platform providing business services and customer management capabilities for individuals, enterprises, and organizations. The number of public accounts has now exceeded ten million, including service accounts, subscription accounts, enterprise accounts, and mini-programs. By the end of 2018, monthly active official accounts reached 4 million, with nearly 1 billion monthly active followers. WeChat’s presence on mobile phone desktops has exceeded 90% penetration. WeChat mini-programs now cover more than 20 major categories and over 200 sub-sectors, with 580,000 mini-programs, 400 million daily active users, over 1 million developers, and 2,300 third-party development platforms.

In the “user-centric” mobile internet era, traditional marketing channels for telecom operators—both online and offline—have begun to experience significant market share declines. The mobile internet has formed a new paradigm of human relationships reconstructed through the WeChat ecosystem, prompting large enterprises and institutions to establish WeChat as their primary channel for public information dissemination. By June 2019, the total number of followers

for enterprise WeChat official accounts had reached 120 million, accounting for 13% of all WeChat users. During the internet transformation process of enterprises and institutions, the WeChat ecosystem has become a crucial entry point.

Fund Project: This paper is a phased research outcome of the Sichuan International Studies University-level research project “Research on the Cultural Education Path of University Integrated Media Platforms—A Case Study of the Sichuan International Studies University News Center” (Project Number: sisu201775).

2. Urgent Need to Improve Enterprise Internet Communication Management Systems in the WeChat Ecosystem

However, current enterprise WeChat ecosystem internet communication management systems still face widespread issues in intensive management and precision push capabilities, primarily manifested in the following aspects:

2.1 Multiple WeChat Official Accounts Within the Same Organization

Research reveals that a large state-owned enterprise has approximately 100 various WeChat official accounts among its provincial-level secondary legal-person subsidiaries, while a state-owned bank operates nearly 200 official accounts. These accounts feature different names, inconsistent visual identities, vastly divergent menu structures, business functions, and communication directions, with varying content quality. This situation reflects the lack of unified management, unified graphic information release and review mechanisms, unified brand image promotion, unified customer service quality control, unified operational analysis and optimization mechanisms, and unified new media channel management systems, thereby creating significant risks in customer experience and public opinion monitoring.

2.2 Lack of Precision in WeChat Official Account Content Operations

Official account operators have limited capacity to obtain audience information. WeChat’s native features only provide basic data support. Without additional technical support, operators cannot effectively record visitor information, making it impossible to conduct in-depth mining of critical operational elements such as user reading habits, access preferences, and dissemination capacity. Consequently, daily operations cannot achieve refined management or precise information targeting.

2.3 Ineffective Audience Expansion Methods for Content Dissemination

WeChat official account content dissemination primarily relies on two operator-controlled methods: content display and key information push. Acquiring new customers typically requires operators to conduct extensive offline promotion activities through QR code scanning and sharing, incurring high implementation costs. While spontaneous user forwarding represents the main approach for diffusive 传播, it is constrained by user habits, as most users do not actively share content. Even when they do, users gain no tangible benefits, leading to the emergence of “clickbait” tactics that sensationalize headlines to induce forwarding.

As platform operators seeking to improve enterprise internet communication management systems within the WeChat ecosystem, several key questions must be addressed: How can we promote the construction of new media operation management systems to achieve standardized and clustered management while expanding customer scale? How can we adapt to mobile internet-era customer service demands and enhance the dissemination and promotion of key services such as 5G, terminals, broadband, and data plans? How can we expand the service and transaction capabilities of WeChat channels across various regions, establish an online-offline collaborative WeChat channel service system, improve customer experience, and better provide unified, professional mobile internet services?

3. Pathways to Enhancing WeChat Official Account Information Dissemination Through Big Data

WeChat service account development is positioned as an integrated mobile internet service marketing platform that aggregates customers through sticky interactions, supporting basic communication services, sticky activities, user management, and user retention. Telecom operators possess vast amounts of customer profile data and communication behavior data, making them typical data-intensive enterprises. This data inherently contains valuable information for business development, enabling operators to fully leverage these “big data” resources for precise analysis of customer behavior, value, and preferences to formulate targeted marketing strategies.

Addressing the issues in WeChat official account operations and communication, and combining this with service development stage theory, we propose establishing a WeChat official account operation platform that integrates big data technology and sticky interactions. This platform would carry enterprise and institutional WeChat public service capabilities, meet operational requirements at various stages, and enhance information dissemination effectiveness. The platform comprises three core components:

First, the sticky interaction module. This module integrates underlying resources across multiple enterprise official accounts, unifying the implementation and management of enterprise public information and business capabilities while forming standardized service interfaces to inject centralized capabilities into various sub-accounts. It supports basic user communication services, sticky activities, user management, and multi-dimensional co-development, solving the problem of unified control over disseminated content across different sub-accounts while empowering functionally limited sub-accounts with centralized capabilities.

Second, the big data-enabled dissemination module. The system supports unified user management, precise information targeting, and accurate push delivery. Empowered by big data, it achieves personalized delivery of communication elements, graphics, templates, and messages for thousands of user segments, enabling fan self-propagation and 裂变 growth. By monitoring spontaneous user dissemination and tracking forwarding trajectories, the system provides feedback to optimize delivery elements.

Third, the operational strategy support module. By establishing a membership rights system and building an activity template library, this module enables rapid marketing campaign launches through simple configuration while providing real-time marketing data visibility. Ultimately, it achieves the goal of “conducting internet-based campaign operations without IT capabilities.”

Through the organic integration of these three core modules, the platform forms an operational toolset for end users while establishing a support system for marketing planners, campaign operators, and content operators. It provides configurable menu entries and business pools covering inquiry, transaction, payment, and activity scenarios, enabling multi-level menu management and sticky interactions.

Through the interaction module, the development and maintenance costs for the provincial platform and 30 sub-account platforms decreased from a combined RMB 7 million annually to RMB 3 million annually, saving RMB 4 million per year.

4. Effectiveness Analysis of the Proposed Solution

Using the WeChat official account operation practices of a Chongqing telecom operator as an example, the company began building a WeChat matrix intensive operation system in early 2019. This initiative strengthened unified basic function support for regional branch official accounts, forming a “1+N” operation model that achieved five unifications: management, planning, support, payment, and operations. By creating three-dimensional business capabilities across capability sharing pools, basic function sets, and activity template libraries, the

system enabled two-level operations with collaborative development, empowering frontline staff and facilitating sales.

Through the big data-enabled dissemination module, personalized marketing functions were implemented. Group-based graphic push read rates increased from 4.05% to 8.58% (a 4.53 percentage point improvement), while message template click-through rates rose from 3.2% to 5.7% (a 2.5 percentage point improvement). These success rate improvements generated a direct net sales increase of RMB 2.6 million.

The operational strategy support module enhanced WeChat channel information supervision and collaborative operation management capabilities. Province A's telecom operator WeChat matrix operation project continuously improved service capabilities through rich operational tools. By creating "interesting, informative, and fun" content and activities, the platform built a warm, highly interactive environment for users, growing into the region's most influential WeChat official account within one year with 6.5 million followers.

Province B's telecom operator launched a fan growth plan in April 2018, achieving 5.7634 million net new followers by the end of 2019, with 3.6 million active fans and an additional 15.24 million monthly user reach, saving RMB 12.75 million in annual advertising costs.

In today's rapidly developing mobile internet era, big data-enabled construction of a WeChat-based operational ecosystem can achieve multi-level, multi-domain collaborative management, functional integration, shared operations, and precision user marketing for WeChat official accounts. From a telecom operator marketing perspective, this significantly improves user experience and enhances and extends user stickiness. From an operator's internal development perspective, the big data-enabled dissemination module substantially achieves cost reduction, efficiency gains, and unified operational support. In the future, enterprise WeChat official accounts should further strengthen integrated development, reinforce internet thinking, and enhance interactive communication, user experience, and product personalization to build an effective dissemination platform that integrates big data technology and sticky interactions.

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Note: The original text contained fragmented sentences and editorial artifacts that have been consolidated or omitted to ensure readability while preserving all substantive content, citations, and data points.

Note: Figure translations are in progress. See original paper for figures.

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