Research on the Application of Technology in Administrative Work Using ChatGPT for English Language Tasks

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Abstract

The research titled "Application of Technology in Correspondence Work Using Chat GPT in English" examines the integration of Chat GPT technology into administrative correspondence tasks, with a focus on enhancing English language communication. This study, conducted in 2024, involved 29 administrative units at Suan Sunandha Rajabhat University. A mixed-methods approach was employed, combining quantitative analysis through Microsoft Excel and qualitative content analysis to assess staff perceptions, readiness for adoption, and challenges encountered when incorporating Chat GPT into routine workflows. The findings reveal that the majority of staff, especially female employees, exhibited a positive attitude towards the use of Chat GPT in administrative tasks. Significant improvements in work efficiency, task accuracy, and adaptability were reported, highlighting the role of Chat GPT in facilitating faster and more accurate communication. Furthermore, the study identified the importance of organizational support, including continuous training and clear strategies, in ensuring successful integration. However, challenges such as limited familiarity with AI tools and initial hesitation among staff were also noted, suggesting the need for further educational initiatives. The results underscore the potential of Chat GPT in optimizing administrative processes and its broader implications for enhancing productivity and efficiency within organizational settings.

Keywords: Chat GPT, Administrative Correspondence, English Communication

1. Introduction

The rapid advancement of technology in recent years has significantly transformed the nature of administrative tasks, particularly in correspondence work. The increasing demand for English proficiency among administrative staff in educational institutions has highlighted the necessity for tools that enhance both efficiency and communication quality. Chat GPT, an AI-driven natural language processing tool, has emerged as a promising solution to address these challenges. This research aims to explore its potential in streamlining correspondence tasks while improving the quality of English communication. The study is rooted in the growing emphasis on integrating AI tools to meet organizational objectives and adapt to dynamic technological landscapes. By examining the perspectives of administrative staff at Suan Sunandha Rajabhat University, this study seeks to provide actionable insights into the acceptance, challenges, and benefits of adopting Chat GPT in correspondence tasks. The

findings aim to contribute to the development of effective strategies for AI integration, aligning with institutional goals of innovation and workforce development. This research also addresses the broader implications of AI usage in administrative workflows, emphasizing adaptability, efficiency, and skill enhancement.

1.1 Research Objective

The research objectives of the study titled " Application of Technology in Clerical Work Using ChatGPT for English Language Tasks" are as follows:

1.1.1 To examine perceptions of administrative staff regarding the use of Chat GPT in their correspondence tasks, with a particular focus on its applicability in English language communication.

1.1.2 To analyze the factors influencing the acceptance and adaptation of Chat GPT and related AI technologies within the administrative workflows.

1.1.3 To identify challenges and obstacles faced by administrative staff in integrating Chat GPT into their routine tasks, and to propose solutions for improving its implementation.

These objectives aim to uncover actionable insights into leveraging AI technologies for enhancing administrative efficiency and communication quality.

2. Literature Review

The foundation of this research is built upon the integration of Artificial Intelligence (AI) into administrative processes, particularly in correspondence work, to enhance efficiency and communication quality. Administrative tasks, as defined by Thai governmental regulations, encompass documentation creation, dissemination, storage, and disposal, all of which demand precision and systematic approaches (Jenjira and Krit, 2017). AI technologies, such as Chat GPT, offer advanced capabilities in natural language processing (NLP), enabling improved text generation, summarization, and real-time translation.

Previous studies highlight the growing adoption of AI in workplace settings, particularly for repetitive tasks, which can lead to time-saving and increased productivity (Radford et al., 2019). Moreover, the literature emphasizes the role of AI in overcoming language barriers through tools like Google Translate and Chat GPT, which provide multilingual support with high accuracy (SAS, 2021).

In addition to the technical advantages of AI, research has explored its impact on workplace dynamics and human behaviors. Wongleedee (2020) examined how factors such as turnover intention and abusive supervision interact with management strategies. This study underscored the importance of considering self-identity and future work self-salience, highlighting the psychological and organizational implications of workplace technologies. Such insights are critical for understanding how AI integration into correspondence tasks may influence employee attitudes and organizational culture.

The application of AI extends to behavioral studies, illustrating its impact on user acceptance, trust, and ethical considerations in technology deployment (Abbott, 2023). This

research aims to bridge the gap between theoretical advancements in AI and practical applications in correspondence tasks. The review underscores the need for continuous training and organizational readiness to maximize the benefits of AI technologies while addressing challenges such as user resistance and technological limitations.

3. Methodology

This study adopts a **mixed-methods research approach** to comprehensively explore the application of ChatGPT in administrative correspondence tasks at Suan Sunandha Rajabhat University. The methodology encompasses both quantitative and qualitative methods to achieve the research objectives effectively. The key elements of the methodology are as follows:

3.1 Research Design

The study employs a **convergent mixed-methods design**, integrating quantitative data analysis and qualitative content analysis to provide a holistic understanding of the research problem.

3.2 Participants and Sampling

- The study involves **29 administrative staff members** from various units at Suan Sunandha Rajabhat University.
- Participants were selected using a **purposive sampling technique**, ensuring diversity in job roles and experiences with ChatGPT to capture comprehensive perspectives.
- **Demographic data**, such as gender distribution and prior familiarity with AI tools, were collected for context.

3.3 Data Collection Methods

Quantitative Data Collection
- A structured **survey questionnaire** was administered to participants, focusing on their perceptions, adaptability, and experiences with ChatGPT in English-language correspondence tasks.
- The questionnaire included **Likert-scale items** to measure factors such as adaptability, operational clarity, and technological benefits.

Qualitative Data Collection
- **In-depth interviews** were conducted with a subset of participants to gain insights into challenges, organizational support, and personal experiences in adopting ChatGPT.
- Observational notes were taken during training sessions and workflow demonstrations to contextualize findings.

3.4 Data Analysis

Quantitative Analysis

- Responses from the survey questionnaire were analyzed using **Microsoft Excel** to calculate descriptive statistics such as mean scores, standard deviations, and frequency distributions.
- Inferential statistics, where applicable, were used to identify significant trends or correlations.

Qualitative Analysis

- Data from interviews and observations were subjected to **thematic content analysis** to identify recurring themes and contextual factors influencing ChatGPT adoption.
- Coding was performed to categorize data into themes such as "initial resistance," "training support," and "perceived efficiency improvements."

3.5 Ethical Considerations
- Participation was voluntary, and informed consent was obtained from all participants.
- Confidentiality of participant responses was maintained, and data were anonymized to ensure privacy.
- The study adhered to ethical guidelines of Suan Sunandha Rajabhat University.

3.6 Limitations
- The sample size was limited to 29 participants, which may affect the generalizability of findings to other institutions.
- Data collection was constrained by time and logistical challenges, particularly in arranging interviews and observing workflows.

This methodological framework ensures a robust and comprehensive evaluation of the role of ChatGPT in enhancing administrative correspondence tasks, offering actionable insights for future implementations.

4. Result

4.1 Demographic Overview

The study included 29 administrative staff members from Suan Sunandha Rajabhat University. A significant majority of the participants were female (79%), while males comprised 21%. This demographic distribution reflects the workforce composition within the administrative units and provides context for analyzing the results (World Economic Forum, 2018).

4.2 Perceptions and Adaptability

Respondents exhibited a high level of adaptability to Chat GPT integration, with an overall mean score of 4.31 out of 5. Participants appreciated the tool's role in enhancing operational clarity (mean: 4.40), staying updated with technological advancements (mean: 4.40), and opportunities for continuous professional development (mean: 4.13). These findings align with studies emphasizing the importance of clear strategic planning in technology adoption (Radford et al., 2019).

4.3 Technological Benefits

Chat GPT was recognized for improving efficiency in English-language correspondence, reducing time spent on repetitive tasks, and increasing task accuracy. Participants noted the tool's ability to simplify complex linguistic tasks, which is consistent with prior research on AI-enhanced workflows (SAS, 2021).

4.4 Key Challenges

Despite its benefits, limited awareness and initial hesitation were identified as barriers to adoption. Many staff members lacked familiarity with Chat GPT's full capabilities, reflecting a broader trend in resistance to new technologies in workplace environments (Abbott, 2023). Timing constraints during data collection and limited diversity in the sample population also posed methodological challenges.

4.5 Organizational Support

Supportive networks and collaborative practices were critical for fostering a positive perception of Chat GPT. Respondents highlighted the value of regular training sessions and institutional support in mitigating initial resistance (Thai Programmer Association, 2018).

These findings highlight the potential of Chat GPT as a transformative tool for administrative correspondence while underscoring the necessity for structured training and strategic implementation to overcome adoption challenges.

Table: Factors Influencing the Integration of Chat GPT in Administrative Tasks

Factor	Mean	SD	Level
Adaptation to social changes using Chat GPT	4.4	0.507	High
Operational clarity and strategic plans	4.4	0.507	High
Continuous self-improvement	4.4	0.507	High
Network support	4.33	0.488	High
Ongoing technology training	4.13	0.743	High

5. Discussion and Conclusion

The research concludes that the integration of Chat GPT into administrative correspondence tasks offers substantial benefits in terms of operational efficiency, accuracy, and staff adaptability. With an overall mean adaptability score of 4.31 out of 5, the findings indicate a strong acceptance of the technology among administrative staff at Suan Sunandha Rajabhat University. Chat GPT's ability to simplify complex linguistic tasks and reduce the time spent on repetitive activities has proven particularly valuable in enhancing English-language correspondence. However, the study also identifies challenges, including limited awareness, initial resistance to adoption, and infrastructural disparities, which may hinder the full utilization of AI tools.

Organizational support, such as regular training programs and clear implementation strategies, was shown to play a pivotal role in overcoming these obstacles. Moreover, the study emphasizes the importance of fostering a culture of continuous learning and collaboration to ensure sustainable integration of AI technologies. These findings align with global trends highlighting the transformative potential of AI in administrative workflows. To maximize its benefits, institutions must address user resistance and invest in strategies that align

technological advancements with organizational goals. Ultimately, the study underscores the need for a balanced approach that combines human expertise with AI capabilities to achieve optimal performance in administrative tasks.

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