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Digital Work Culture in the Era of Society 5.0: An Observational Case Study in the Higher Education Administrative Environment

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A B S T R A C T

This study investigates the digital work culture within the administrative environment of Universitas Quality through an observational case study on the implementation of integrated systems including Q-Enterprise, Q-Layanan, Q-Skripsi, Q-Kinerja, Q-Course, and Q-Tracer. The findings indicate that these digital systems have significantly enhanced efficiency, transparency, and accountability in administrative workflows. However, challenges persist, particularly in the form of cultural resistance, limited two-way interaction, and low levels of engagement in self-directed learning. These findings highlight the critical importance of inclusive digital leadership, cross-generational digital literacy development, and reflective, data-driven evaluation mechanisms. The study recommends the advancement of adaptive and human-centered digital systems to support the transformation of organizational work culture in the context of Society 5.0.

INTRODUCTION

The rapid development of digital technology over the past two decades has brought about significant changes across various sectors, including higher education. The concept of Society 5.0, first introduced by the Japanese government, emerged as a response to the fast-paced progress of the Fourth Industrial Revolution. While the Industrial Revolution 4.0 emphasized automation and digital integration, Society 5.0 seeks to go further by placing humans at the center of innovation and technological application, aiming for overall social well-being (Hamedani et al., 2024).

In the context of higher education, Society 5.0 demands comprehensive transformation—not only in pedagogical approaches, but also in institutional governance systems, including the prevailing work processes and organizational culture. One of the primary challenges facing higher education institutions today is not merely the availability of digital infrastructure, but the capacity of human resources to integrate technology into an efficient, collaborative, and adaptive work culture (Yarasi & Ozturkki, 2022).

Digital work culture has thus become a central concept in organizational transformation in this era. It not only reflects the use of digital tools to complete tasks, but also encompasses the mindset, values, norms, and collective behaviors that support the utilization of technology in the workplace (Ivanov, 2023). In higher education settings, this culture manifests in the digitalization of administrative services, adoption of academic management platforms, use of collaborative applications such as e-office systems, and openness to digital innovation.

Nevertheless, digital transformation in higher education institutions often encounters significant challenges. Various studies have identified a gap between technological availability and the readiness of organizational culture. For example, online academic systems are frequently implemented without sufficient staff training or strong leadership support (Fernández et al., 2023). Additionally, resistance to change, rigid bureaucratic workflows, and weak interdepartmental communication are among the key obstacles in cultivating an effective digital work culture (Maisan Falah et al., 2025).

In this context, transforming work culture in the digital era requires institutional leaders to play a strategic role in fostering a work ecosystem that supports digital innovation. Digital leadership involves more than technical competency in managing information systems; it also requires the ability to instill values of collaboration, openness, and continuous learning among staff members (Jing, 2025). Leaders must also ensure that technological change does not marginalize the human aspect of work—echoing the spirit of Society 5.0, which emphasizes the integration of technology with social values.

While numerous studies have examined digital transformation in higher education, most have focused on technological or policy aspects. In contrast, research that explores how digital work culture is actually formed and practiced—particularly within higher education administration—remains limited. This is despite the fact that administrative units serve as the backbone of institutional operations, and their workflows are strongly influenced by the dynamics of organizational culture.

In this regard, direct observation of digital work practices is a relevant approach to understanding the lived reality of work culture. Through observation, researchers can capture day-to-day interactions among staff, actual use of digital tools, and responses to institutional digital policies. Such data is contextual, concrete, and capable of portraying the dynamics of work culture in greater depth.

Accordingly, this study aims to provide an in-depth exploration of digital work culture within the administrative environment of a higher education institution. Using an observational case study approach, this research maps how administrative staff interpret and engage in digitally mediated work processes, including the challenges and opportunities they encounter in adapting to the demands of Society 5.0. The study focuses on staff interactions with academic information systems (SIAKAD), utilization of online collaboration platforms, patterns of digital communication between units, and the role of leadership in shaping a conducive digital work culture.

The findings of this study are expected to contribute both theoretically and practically to the effort of building a digital work culture that is not only efficient, but also inclusive and human-centered. Furthermore, the results may serve as a reference for policymakers and university leaders in designing digital transformation strategies grounded in an authentic understanding of institutional work culture.

LITERATURE REVIEW

Work Culture in the Context of Higher Education Institutions

Organizational work culture refers to the values, norms, and collective behaviors that evolve within a work environment. In higher education institutions, work culture not only reflects the efficiency and performance of administrative staff but also serves as a strategic factor in supporting the academic mission and institutional governance. Schein (2017) emphasizes that organizational culture is shaped through shared experiences and transmitted via social interaction. In universities, work culture is deeply influenced by bureaucratic structures, institutional leadership, and prevailing academic-administrative norms (Hamedani et al., 2024).

Indicators of a healthy work culture in higher education include openness to innovation, cross-unit collaboration, professional responsibility, and effective internal communication. When these indicators are underdeveloped, technological adoption often fails to translate into meaningful transformation (Akman et al., 2024).

Digitalization of Higher Education Administration

Administrative digitalization refers to the integration of information technology into core administrative functions such as finance, human resources, academic services, and document management. Systems such as Enterprise Resource Planning (ERP), Academic Information Systems (SIAKAD), Learning Management Systems (LMS), and e-office platforms form the backbone of digital service transformation in education. According to Fernández et al. (2023), while digitalization enhances efficiency and transparency, its success largely depends on an organization's readiness to embrace a digital culture.

Digital transformation cannot be achieved merely by providing hardware and software; it also requires cultural adaptation, human resource training, and adjustments to organizational structures to support flexibility and digital collaboration (Ivanov, 2023). In developing countries, infrastructure limitations, digital literacy gaps, and bureaucratic rigidity remain dominant barriers (Maisan Falah et al., 2025).

Digital Work Culture

Digital work culture refers to the value systems and work practices that utilize digital technologies to support operational processes, communication, and collaboration. This culture emphasizes flexibility, agility, openness to digital learning, and cloud-based collaboration (Azra et al., 2025). Key characteristics of digital work culture include: (1) Adaptation to online systems and digital tools; (2) Capability to work remotely or in hybrid formats; (3) Use of technology for data-informed decision making; and (4) Real-time, integrated communication across work units.

Digital work culture is not solely about technology usage but also about how technology shapes behavior, expectations, and employee work ethics. Ivanov (2023) argues that organizations that successfully adopt a digital culture are characterized by collaborative, autonomous, and outcome-oriented practices.

Leadership and Cultural Change in the Digital Era

Digital leadership plays a critical role in orchestrating cultural transformation in the digital era. Jing (2025) notes that successful academic leaders are those who can align institutional digital visions with practical implementation. This involves designing digital transformation policies, mentoring staff, and fostering ecosystems that encourage continuous learning and innovation.

The importance of leadership in facilitating cultural change is also highlighted by Yarasi and Özturkii (2022), who assert that the transition to Society 5.0 requires not only technological adoption but also the ability of leaders to cultivate a spirit of digital collaboration throughout all levels of the organization.

Society 5.0 and Its Implications for Organizational Culture in Higher Education

Society 5.0 is a new social paradigm that emphasizes the use of intelligent technologies such as Artificial Intelligence (AI), the Internet of Things (IoT), and Big Data to enhance inclusive social well-being. In higher education, this paradigm encourages the transformation of institutional management toward a more responsive, human-centered, and data-driven model (Hamedani et al., 2024).

The direct implications for work culture include an increased demand for rapid service delivery, transparency in information access, and active participation from all stakeholders in the university's digital ecosystem. However, the implementation of Society 5.0 across higher education systems globally still faces significant challenges such as technological access disparity, rigid bureaucratic structures, and a shortage of digitally prepared human resources (Fernández et al., 2023).

Case Study and Observational Approaches in Work Culture Research

Research on work culture is often conducted using qualitative approaches, which allow researchers to capture the complexities of social realities. Observational case study approaches are particularly relevant as they provide concrete portrayals of day-to-day practices, interpersonal relationships, and the dynamics of technology adoption in university administrative settings (Creswell & Poth, 2018).

Observational studies help uncover both explicit and implicit work practices, including cultural barriers that may not emerge in surveys or interviews. This approach offers an authentic depiction of how digital work culture is experienced, interpreted, and embodied by organizational actors in their specific contexts.

RESEARCH METHODOLOGY

This study employed a qualitative approach with an observational case study design, as its primary focus was to explore in depth the phenomenon of digital work culture as it naturally occurs within the administrative environment of a higher education institution. This approach allowed the researcher to capture social reality as it unfolds, particularly regarding how technology is integrated into daily work practices and how employees adapt to digital changes (Creswell & Poth, 2018). A case study design was selected because it enables the exploration of complex analytical units within a specific and bounded context, which aligned with the characteristics of the research setting (Yin, 2018).

The subjects of this study consisted of administrative staff and academic service unit leaders at Universitas Quality, where academic governance has been systematically digitized. The site was selected purposively, based on the consideration that the institution had implemented a digital-based academic management system for at least the past two years and had actively used Academic Information Systems (SIAKAD) and online collaboration platforms to support administrative operations.

Data were collected through non-participant observation and reflective field notes. The researcher directly observed work activities within administrative offices during regular working hours. The focus of observation included: patterns of digital interaction among staff, the use of software and applications to complete administrative tasks, online communication habits across units, and responses to technological constraints and adaptation challenges. Observational data were recorded in systematic field logs and supported by limited visual documentation (e.g., workspace layouts, digital team structures, and system records), while adhering to ethical principles and institutional approval protocols.

The primary instrument used in this study was a structured observation sheet, developed based on indicators of digital work culture from Ivanov (2023) and Azra et al. (2025). The instrument comprised five key dimensions: (1) digital literacy and competency of staff, (2) intensity of collaboration through digital platforms, (3) adaptation to digital academic management systems, (4) dynamics of technology-based internal communication, and (5) cultural barriers or resistance to digital transformation.

Each dimension was elaborated into measurable qualitative behavior indicators, accompanied by narrative columns for descriptive notes from direct observation.

Data analysis followed the interactive model of Miles, Huberman, and Saldaña (2019), consisting of three main stages: data reduction, data display, and conclusion drawing. Observational data were reduced into core themes consistent with the digital work culture framework. Data were then presented in descriptive narratives and thematic matrices to identify work patterns, inconsistencies, and emerging cultural dynamics. Open coding and thematic categorization were performed using NVivo 14 qualitative analysis software to enhance consistency and reliability of findings.

To ensure the validity and credibility of the data, triangulation by time and location was applied—observations were conducted during different working hours and across various academic service units. An audit trail was maintained for the entire process of data collection and analysis. The researcher also engaged in critical reflection to minimize personal bias during observation and conducted limited member checking with unit leaders to confirm the interpretation and accuracy of the observational narratives.

This study was conducted in accordance with ethical principles in social research. Formal approval was obtained from the institution, the anonymity and confidentiality of observed individuals were ensured, and all relevant parties were informed that the research results would be used solely for academic and scholarly development purposes. This commitment ensured that the research process was not only methodologically sound, but also ethically and socially legitimate.

RESEARCH RESULTS

This study reveals that Universitas Quality has successfully developed a systemic digital work culture through the integration of various internal platforms, including Q-Enterprise, Q-Layanan, Q-Skripsi, Q-Kinerja, Q-Course, Q-Tracer, and the Student Portal. The implementation of these applications has not only improved administrative efficiency but also shaped employees' mindsets, values, and social interactions—both among staff and between the institution and students. A two-week observation indicated that digital systems had replaced the majority of conventional processes, although cultural adaptation dynamics remain a significant challenge in this transformation.

One of the most notable findings was the function of Q-Enterprise as the central digital administrative control system. All administrative staff, both functional and managerial, utilized individual accounts and passwords to access the platform, dispatch official memos, manage document workflows, and monitor task progress. This created a work culture based on digital accountability, as all actions were traceable via system logs. Nevertheless, some senior staff continued to print digital documents as physical backups, signaling that the shift toward a fully paperless culture had yet to be fully internalized. This is in line with Antonopoulou's (2023) findings, which emphasize that while digital transformation enhances efficiency and transparency, long-standing bureaucratic habits and individual resistance often hinder meaningful cultural change in higher education institutions.

Meanwhile, Q-Layanan and the Student Portal have become the backbone of digital services for students and alumni. Services such as active enrollment letters, academic leave requests, and diploma legalization are accessed via a ticketing system, eliminating the need for in-person visits. The service process is rapid, with response times ranging from 4 to 12 hours and more than 78% of tickets completed within a single working day. However, the interaction remains largely one-directional—staff respond to tickets without providing open dialog channels. This phenomenon echoes findings by Fernández et al. (2023), who observed that in many online academic service systems, efficiency is often not accompanied by meaningful interpersonal interaction between users and administrative personnel.

Furthermore, the Q-Skripsi platform plays a vital role in facilitating academic collaboration among students, supervisors, examiners, department heads, deans, and the university leadership. Processes such as proposal submissions, supervision logs, revisions, and thesis evaluations are managed digitally, allowing stakeholders to access students' progress and academic history in real time. This fosters a transparent and participative academic culture, wherein interactions are no longer constrained by physical space or time. Jing (2025) supports this view, stating that digital academic leadership, supported by collaborative systems, can broaden participation and optimize quality assurance processes in academia.

From a managerial perspective, Q-Kinerja serves as a primary tool in shaping a performance-oriented work culture. Staff members are required to plan quarterly targets, document their achievements, and upload supporting evidence through the platform. Approximately 78% of staff actively update their performance documentation. However, many still complete the forms shortly before deadlines, indicating that the system is often perceived as a bureaucratic requirement rather than a reflective professional development tool. Díaz-García et al. (2023) assert that digital performance evaluation systems are only effective when supported by a reflective culture and consistent two-way feedback—not merely formal reporting.

The implementation of Q-Course reflects the university's effort to foster a culture of self-directed learning. This platform offers cross-disciplinary online modules aimed at enhancing the knowledge and skills of students, lecturers, and administrative staff. Observation revealed active student participation, particularly in courses related to communication and digital literacy. However, the engagement level of administrative staff remains low, suggesting that a sustainable learning culture has yet to take root among non-academic employees. This aligns with Echtenbruck et al. (2025), who emphasize that cultivating a digital learning culture requires more than just access to technology—it must begin with the internalization of learning needs and motivation.

Finally, Q-Tracer is utilized for alumni tracking (tracer studies), serving as a foundation for curriculum evaluation and program relevance. Alumni submit data that is monitored and analyzed periodically by the student affairs office. While participation levels fluctuate, this system reflects a shift toward longitudinal, data-driven institutional evaluation, moving beyond annual narrative reports. Bravo-Jaico et al. (2025) note that

the ability to digitally manage and integrate alumni data is one of the hallmarks of digital maturity in higher education institutions.

In conclusion, the findings of this study confirm that Universitas Quality has succeeded in building a digital work culture ecosystem that goes beyond technological transformation. It has encouraged transparency, accountability, and performance orientation within the institution. Nevertheless, the full internalization of digital culture—particularly in terms of reflective learning, meaningful two-way communication, and cross-generational digital literacy—remains a critical challenge. Addressing this requires a strategy of continuous training, inclusive digital leadership, and organizational commitment to cultural adaptation.

DISCUSSION

The findings of this study indicate that Universitas Quality has successfully established a digital work culture through the integration of comprehensive internal platforms such as Q-Enterprise, Q-Layanan, Q-Skripsi, Q-Kinerja, Q-Course, Q-Tracer, and the Student Portal. This transformation has led to a significant shift in administrative workflows, moving from paper-based to fully digital and automated systems. A central strength of this digital infrastructure lies in its emphasis on personal accountability, wherein all administrative staff, faculty, and academic leaders use individual accounts and passwords to access the system and log their activities. This practice aligns with Serpa et al. (2022), who affirm that accountability is a key element of a robust digital culture in higher education institutions, as it fosters transparency and individual responsibility through systematically recorded actions enabled by digital technology.

However, cultural transformation is not solely dictated by technology but by the readiness and adaptability of the individuals using it. While the majority of younger employees have adopted digital systems optimally, a portion of senior staff continue to print digital documents as physical backups. This reflects cultural resistance to change, a phenomenon also noted by Antonopoulou (2023), who asserts that transitioning to a digital work culture requires leadership intervention that addresses not only structural but also cultural dimensions. Shifting work behavior—especially among employees long accustomed to conventional practices—remains a major challenge that necessitates sustained training and mentoring strategies.

Meanwhile, Q-Layanan and the Student Portal have made a tangible contribution to the improvement of academic service efficiency. Requests for official letters, document legalization, and alumni services are now processed online, with average response times ranging from 4 to 12 hours, and over 78% of cases completed within one working day. These achievements reflect a mature digital service system approaching public-sector technology standards. However, the study also reveals limitations in two-way communication between students and administrative staff. Students often find it difficult to engage in dynamic dialogue, as the ticketing system supports only one-way interactions. This is consistent with the findings of Fernández et al. (2023), who argue that although digitalization can enhance the speed and accessibility of services, the quality of

interpersonal communication may deteriorate if systems are not designed with participatory and responsive principles in mind.

The Q-Skripsi platform exemplifies a transformation toward more transparent and collaborative academic governance. This system enables students, supervisors, examiners, program heads, and deans to access real-time updates on thesis progress. Features such as supervision logs and automated notifications reinforce the practice of digital academic leadership, in which all academic stakeholders are actively involved in the supervision and assessment process. This model aligns with Jing (2025), who notes that the use of digital systems in academic processes not only improves efficiency but also strengthens academic accountability and broadens participation in data-informed decision-making.

In terms of performance management, the Q-Kinerja application serves as the primary medium for fostering a performance-based work culture. Staff members are required to develop quarterly work plans, record their accomplishments, and upload supporting evidence. This shifts the perception of performance from physical presence to output quality. However, the study found that many employees perceive the system as a mere administrative obligation, as evidenced by the tendency to update entries close to submission deadlines. This suggests that a reflective work culture has yet to be fully established. Díaz-García et al. (2023) emphasize that digital performance systems succeed only when they are supported by a culture of reflection, collaboration, and participatory evaluation, rather than being treated as formal reporting mechanisms.

In addition to management systems, Universitas Quality is also working to build a culture of digital learning through Q-Course. This platform provides various online courses, ranging from digital literacy to communication skills. Students show high levels of participation, particularly in courses related to technology and soft skills. However, participation among administrative staff remains limited, indicating that a culture of continuous learning has not yet been fully adopted across institutional units. Echtenbruck et al. (2025) assert that developing a digital learning culture requires organizational support through formal recognition of learning outcomes, integration into incentive systems, and institutional reinforcement of digital literacy. This suggests that the mere availability of a learning platform does not guarantee a learning culture without a systematic and strategic institutional effort.

Furthermore, Q-Tracer offers a new approach to longitudinal alumni evaluation. Although alumni participation varies, the system has enabled the university to gain deeper insights into curriculum relevance, industry needs, and graduate outcomes. Bravo-Jaico et al. (2025) emphasize that digital maturity in higher education includes the ability to use alumni tracer data effectively for strategic planning and quality assurance. As such, Q-Tracer is not merely a data collection tool, but a foundational component of a responsive, outcome-based curriculum development process.

Theoretically, these findings resonate with the framework of sociomateriality, as introduced by Orlikowski (2000), which posits that technology and work practices are dynamically interwoven and mutually constitutive. In the context of Universitas Quality,

digital technology is not merely a supporting tool, but an integral component of identity formation, interaction patterns, and decision-making processes. Moreover, according to the digital transformation maturity model proposed by Singun (2025), Universitas Quality can be categorized as having reached an intermediate to advanced stage of maturity, particularly in governance, service delivery, and evaluation systems. However, further development is still required in fostering a reflective work culture, inclusive leadership across generations, and a sustainable institutional learning environment.

CONCLUSION

This study reveals that Universitas Quality has successfully established and implemented a systemic digital work culture through the utilization of various internal platforms such as Q-Enterprise, Q-Layanan, Q-Skripsi, Q-Kinerja, Q-Course, and Q-Tracer. The integration of these digital platforms has contributed significantly to improving administrative efficiency, process transparency, individual accountability, and the enhancement of academic services and institutional governance.

The digital systems have enabled staff and academic communities to access information, report activities, and complete tasks in real time, supported by features such as historical logs, tracking mechanisms, and personalized account authorization. The prevailing work culture is now more oriented toward performance-based outcomes, responsive service delivery, and data-driven planning and evaluation. These findings align with the principles of digital maturity in higher education, which emphasize the importance of integrating technology, organizational culture, and digital leadership.

Nevertheless, certain challenges remain, including cultural resistance among some staff, limited internal reflection within performance systems, and low participation in digital learning, particularly among non-academic personnel. Moreover, two-way communication between digital service systems and users requires improvement to ensure that digital efficiency aligns with relational quality and institutional communication standards.

RECOMMENDATION

Based on the study findings and supporting literature, the following recommendations are proposed to further strengthen and refine the digital work culture at Universitas Quality:

1. Strengthening Cross-Generational Digital Literacy
   The university should provide regular digital literacy training, particularly for senior staff who tend to exhibit resistance toward paperless systems. Hands-on, practice-oriented training would be more effective in building confidence and competence.
2. Integrating Feedback and Reflection into Performance Systems
   Q-Kinerja should include reflective features or discussion forums that allow staff to evaluate their work processes beyond administrative reporting. A reflection-based performance evaluation system can foster organizational learning and continuous improvement.

3. Developing Inclusive Digital Leadership
   Academic and structural leaders must act as facilitators of digital transformation, not merely evaluators. Cross-unit engagement and open communication are essential to fostering a collaborative and innovative institutional culture.
4. Improving Two-Way Communication in Digital Services
   Platforms such as Q-Layanan and Q-Skripsi should be enhanced with interactive discussion or live chat features to facilitate real-time clarification and dialogue between staff and users (students/faculty).
5. Incentivizing Self-Directed Digital Learning
   The university should recognize and reward staff participation in Q-Course, through professional development certificates or SKP (performance credit) points. This would encourage the growth of a lifelong learning culture across all institutional levels.
6. Utilizing Tracer Data for Program and Curriculum Evaluation
   Data from Q-Tracer should be fully integrated into study program and academic unit evaluations to ensure that tracer studies inform strategic decision-making, not merely serve as data collection exercises.

ADVANCED RESEARCH

The findings of this study demonstrate that the digital work culture transformation within the administrative environment of Universitas Quality has progressed systemically through the implementation of integrated applications such as Q-Enterprise, Q-Layanan, Q-Skripsi, Q-Kinerja, Q-Course, and Q-Tracer. While efficiency, transparency, and accountability have been significantly enhanced, observational data also reveal persistent cultural challenges, generational disparities in digital literacy, and limited participation in self-directed learning. These findings open promising avenues for further research that can expand both the academic discourse and practical implementation of digital work culture in higher education, especially in navigating the complex demands of the Society 5.0 era.

One promising direction for future research involves the development of a transformational digital leadership model in higher education—one that promotes inclusive and adaptive technology integration. Such leadership is expected to go beyond administrative functions by serving as a visionary and transformative force in cultivating collaborative and innovative organizational cultures. Subsequent studies should also investigate the process of cross-generational digital culture adaptation, as field data indicate clear gaps in attitudes and competencies between senior and junior staff. Longitudinal studies could be conducted to trace the evolution of digital work culture over time and examine how training and motivation influence behavioral changes in digital practices.

Moreover, the limited two-way communication between administrative staff and system users (students and faculty) in platforms such as Q-Layanan suggests the need for further inquiry into the effectiveness of digital communication in academic service

systems—particularly from a user experience (UX) and system design perspective. This study also encourages further investigation into the effectiveness of self-directed learning platforms like Q-Course, to understand the barriers to administrative staff engagement and to explore how incentives, formal recognition, or integration into performance evaluation systems might foster a stronger digital learning culture among non-academic personnel.

On the other hand, the Q-Tracer platform for alumni tracking presents an opportunity to serve as a vital data source for industry-responsive curriculum planning. Future research could explore the application of artificial intelligence (AI) or machine learning to analyze correlations between graduate data, acquired competencies, and program relevance—thereby enabling institutions to implement longitudinal, data-driven evaluation systems. Finally, comparative studies of digital work culture across public and private universities, both in Indonesia and the broader Southeast Asian region, are also warranted. Variations in bureaucratic structures, governance models, and digital incentive policies could yield valuable insights into how external and internal factors influence the digital maturity of higher education institutions.

By advancing these future research directions, scholars can contribute more robustly to the theoretical development of digital transformation, digital work culture, and sociomateriality within the higher education context. Practically, the outcomes of such studies may inform the design of institutional policies, digital system architectures, and human resource development strategies that are more adaptive, inclusive, and sustainable in the face of rapid digital change.

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