

## A RESEARCH REVIEW ON DIGITAL COMPETENCE AND PUBLIC SECTOR STREAMLINING: THE CASE OF THE VIETNAM WOMEN'S UNION

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ARTICLE INFO	ABSTRACT
Received: 17/4/2025	This study investigates the digital competence of staff within the Vietnam Women's Union in the context of national digital transformation and public sector reform. It aims to identify existing competency gaps, examine influencing factors, and develop a tailored digital competence framework. Employing a mixed-methods approach, the study surveyed 390 staff members across central, provincial, and grassroots levels, and conducted in-depth interviews and focus group discussions with 20 individuals and six community groups in Lao Cai, Dak Lak, and Ben Tre provinces. The findings highlight substantial disparities in digital skills based on age, geographic region, and administrative level particularly in data management, cybersecurity, and online collaboration. These disparities are further exacerbated by infrastructural deficiencies and insufficient training programs. In response, the study proposes a structured digital competence framework, a tier-specific training roadmap, integrated monitoring mechanisms, and targeted investment in information and communication technology infrastructure to enhance digital readiness and capacity within the organization.
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KEYWORDS	Digital competence Public sector Streamlining Gender Digital transformation

## NGHIÊN CỨU ĐÁNH GIÁ VỀ NĂNG LỰC SỐ VÀ SỰ TINH GỌN CỦA KHU VỰC CÔNG: TRƯỜNG HỢP CỦA HỘI PHỤ NỮ VIỆT NAM

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THÔNG TIN BÀI BÁO	TÓM TẮT
Ngày nhận bài: 17/4/2025	Nghiên cứu này phân tích năng lực số của đội ngũ cán bộ Hội Liên hiệp Phụ nữ Việt Nam trong bối cảnh chuyển đổi số quốc gia và cải cách khu vực công, nhằm nhận diện khoảng cách năng lực, phân tích các yếu tố tác động và đề xuất khung năng lực số phù hợp theo từng cấp độ. Với phương pháp tiếp cận hỗn hợp, nghiên cứu đã khảo sát 390 cán bộ thuộc cấp trung ương, tỉnh và cơ sở, đồng thời thực hiện phỏng vấn sâu và thảo luận nhóm tại ba tỉnh: Lào Cai, Đăk Lăk và Bến Tre, với sự tham gia của 20 cá nhân và 6 nhóm cộng đồng. Kết quả cho thấy sự chênh lệch rõ rệt về kỹ năng theo độ tuổi, vùng miền và cấp hành chính, đặc biệt trong các lĩnh vực quản lý dữ liệu, an ninh mạng và hợp tác trực tuyến, bị ảnh hưởng bởi hạn chế về hạ tầng và thiếu hụt chương trình đào tạo. Nghiên cứu đề xuất khung năng lực số có cấu trúc rõ ràng, lộ trình đào tạo theo từng tầng cấp, cơ chế giám sát tích hợp và tăng cường đầu tư cho hạ tầng công nghệ thông tin – truyền thông.
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## 1. Introduction

In the era of the Fourth Industrial Revolution, digital transformation has become an inevitable trend in all fields, especially in public administration. Some Vietnamese and international studies on digital capacity and digital transformation associated with streamlining the public apparatus can be summarized as follows: According to Bo Peng et al. [1], digital leadership capacity and state capacity are theoretically based on the same foundation. They are organic bodies supported by digital understanding, digital decision-making, digital implementation and digital guidance, with digital thinking as the basis. Valerie Albrecht [2] found that agile practices are applied through practical application, reflection and networking, although organizational rigidity and resource constraints pose barriers. Pratim Datta et al. [3] pointed out that the main challenges include political instability, bureaucratic resistance, and low levels of digital literacy, emphasizing the importance of stakeholder engagement, modular implementation, and incremental adoption in large-scale public sector digital transformations. According to Nusat et al. [4], integrating new technologies in the public sector helps strengthen knowledge, skills, and attitudes, requiring strategic development and a focus on digital and soft competencies such as problem-solving and communication. Daoud Jerab et al. [5] revealed the impact of digital transformation on public services, examining its impact on efficiency, accessibility, and citizen engagement. According to Thanh et al. [6], building a governance model aligned with digital technology is essential. A government that assumes a digital leadership role becomes a core element of a digital society. Kluge and Schüller [7] further emphasized the role of digital skills in reducing the digital divide across Europe, while Gil-García et al. [8] highlighted how digital government practices contribute to generating public value and reshaping public management paradigms. Digital leadership and state capacity share a common foundation both rely on digital thinking and are sustained by digital knowledge, decision-making, implementation, and strategic direction. In the Fourth Industrial Revolution, digital transformation is vital, particularly in public administration. Vietnam has prioritized digital government through key policies like Resolution No. 18-NQ/TW [9] and Decision No. 749/QD-TTg [10] to enhance efficiency and inclusiveness.

The Vietnam Women's Union (VWU) plays an important role in promoting gender equality, supporting women's empowerment and promoting inclusive development. However, the VWU also faces the need to modernize its operations, especially when faced with the task of cutting administrative costs while expanding reach and efficiency. In this context, the digital capacity of its staff becomes a strategic priority. Despite increasing access to technology, many VWU staff, especially at the grassroots level, still have limited digital literacy. This gap is particularly pronounced between regions and between different age groups. These limitations not only affect internal effectiveness but also the Union's capacity to support women in remote and disadvantaged areas, where digital inclusion remains a significant challenge. This study aims to examine digital literacy within the VWU, identify key influencing factors, and suggest practical solutions. The goal is to equip staff with essential digital skills and promote digital inclusion for women nationwide.

## 2. Methodology

This study employed a mixed-methods research design, integrating both quantitative and qualitative approaches to provide a comprehensive understanding of the digital competence levels among Vietnam Women's Union staff. The methodology included survey distribution, semi-structured interviews, and focus group discussions.

Quantitative component: A structured questionnaire was administered to 390 VWU staff members across three administrative levels (central, provincial, and grassroots) and three representative provinces (Lao Cai, Dak Lak, and Ben Tre). The questionnaire assessed four core areas of digital competence: (1) proficiency in digital tools (e.g., office software, mobile

applications), (2) information and data management, (3) online communication and collaboration, and (4) cybersecurity awareness. Data were analyzed using SPSS 20.0 with descriptive statistics and inferential methods (t-tests, ANOVA) to explore demographic differences [11].

Qualitative component: Twenty in-depth interviews were conducted with a purposive sample, including VWU staff, local leaders, and digital transformation experts. Additionally, six focus group discussions (FGDs) were organized in rural and urban settings to explore perceptions, challenges, and training needs related to digital technology. Each FGD included 8–10 participants.

Data integration and validation: Triangulation was employed to cross-verify findings from different sources. The reliability of the survey instrument was confirmed with Cronbach's Alpha values exceeding 0.7. Qualitative data were analyzed using content analysis, identifying key themes and patterns to support the quantitative insights [12].

This methodology enabled the research team to capture both statistical trends and contextual realities of digital competence within VWU, ensuring the proposed solutions are both evidence-based and practical.

### 3. Findings and discussion

This section summarizes the main findings drawn from surveys, interviews, and focus group discussions with Vietnam Women's Union officials and stakeholders. The analysis covers four key themes: (1) digital competence, (2) institutional barriers, (3) gender-related challenges, and (4) factors supporting digital skill development.

#### 3.1. Digital competence levels across VWU officials

The survey results highlight a significant digital competence gap among VWU staff, with the most pronounced deficiencies observed at the grassroots level. Key findings reveal that 72.3% of respondents lack confidence in using essential digital communication tools such as email, Zoom, and Zalo for professional tasks, indicating a critical barrier to efficient remote collaboration. Furthermore, 64.8% of commune-level officers reported having never participated in a formal ICT training program, underscoring systemic gaps in workforce capacity-building initiatives. Data processing skills were also found to be severely limited, with only 15.1% of VWU staff demonstrating familiarity with fundamental tools like Microsoft Excel or Google Sheets.

A hierarchical analysis of digital competencies revealed stark disparities across administrative levels. Central-level staff exhibited higher self-assessed proficiency in digital content creation (41.2%), compared to their provincial (23.6%) and commune-level (8.4%) counterparts. This divide aligns with prior research [13], which indicates that changing the mindset and awareness of how to organize and operate the state apparatus, especially the state administrative apparatus, is always a very difficult problem for all countries in an ever-changing environment. These findings suggest an urgent need for targeted ICT training programs and decentralized digital literacy initiatives to bridge the competence gap and enhance organizational efficiency across all levels of the VWU.

#### 3.2. Structural and institutional barriers

The study identifies several systemic barriers that limit the development and utilization of digital competence within the VWU:

Infrastructure deficiencies: interviewees in rural and mountainous areas, particularly in Dak Lak and parts of Lao Cai, reported unreliable internet access, limited availability of digital devices, and lack of IT support. Commune-level VWU offices often rely on personal mobile phones and outdated desktops, with no budget allocation for ICT upgrades.

“We don't even have a scanner or a working printer in our office, let alone modern software,” said one commune leader from Dak Lak.

Inadequate training programs: while the VWU has initiated some digital literacy projects, there is no institutionalized, tiered training curriculum tailored to the specific responsibilities of

officials at different levels. Existing training efforts are sporadic, overly generic, or delivered in lecture-style formats with minimal hands-on practice.

Furthermore, 84% of respondents indicated that digital training, if any, was optional and did not link to career development or performance incentives, reducing motivation to engage.

Absence of a competence framework: unlike other public institutions that have adopted the DigComp or modified frameworks [14], the VWU lacks a clear organizational definition of digital competence and its expected outcomes. Without a formal framework, it becomes difficult to assess learning needs, measure progress, or align training with actual job tasks.

### **3.3. Gender-specific constraints in digital competence**

As a women-centered organization, the VWU operates in a context where gender plays a significant role in digital access and skill development. The research identified several constraints that disproportionately affect female staff and members:

Time poverty and care work burden: many female officers, particularly at the commune and district levels, balance professional duties with caregiving responsibilities at home. As a result, they have limited time to participate in extended training programs or self-directed learning.

“We work all day, take care of families in the evening, and barely have time to explore new technologies,” one female officer from Ben Tre shared.

Gender norms and technophobia: in more conservative regions, there remains a perception that digital tools are unnecessary or even inappropriate for women, especially older ones. This has led to a lack of confidence and sometimes even resistance to digital learning.

Survey data supports this, showing that women over the age of 45 were 34% less likely to self-rate their digital skills as “sufficient” compared to younger staff.

Limited role models and peer networks: interviews highlighted a lack of visible female digital champions within the organization. Most training sessions are led by external consultants, and peer support systems are underdeveloped. This hinders the creation of a learning culture and sustained motivation.

### **3.4. Opportunities and enabling factors**

Despite these challenges, the study also identifies several enablers that could support the VWU’s digital transformation if leveraged strategically.

High motivation among staff: an encouraging 82.7% of survey respondents expressed interest in receiving training on digital tools and platforms. This figure was even higher (91%) among staff under the age of 35.

This finding suggests that intrinsic motivation exists and could be harnessed through well-designed training incentives and recognition mechanisms.

Policy alignment and external support: the government’s push for digital transformation, including the National Digital Transformation Program, provides a favorable policy environment for public organizations like the VWU to seek support and resources. Interviews with local authorities indicated a willingness to collaborate with the VWU on joint training programs and shared infrastructure.

Potential of mobile learning and peer mentorship: the research found that VWU staff are already using mobile applications like Zalo, Facebook, and TikTok in personal contexts. With proper guidance, these platforms could be repurposed for digital learning and community engagement.

Additionally, peer mentoring where more digitally competent staff guide others was cited as a promising approach, particularly in resource-constrained settings.

### **3.5. Discussion bridging the gap between vision and capacity**

The findings underscore a key paradox: while the VWU has a strong institutional mandate and motivation to digitize, its operational capacity remains limited due to structural, technological,

and socio-cultural barriers. This gap between policy vision and organizational readiness is not unique to the VWU but reflects broader trends in public sector digital transformation in developing countries [15], [16].

To close this gap, it is essential to adopt a holistic approach that simultaneously addresses four key areas:

Capacity: through tiered, practical, and accessible training aligned with job roles;

Culture: by fostering a digital mindset and creating safe spaces for learning;

Systems: via infrastructure investment and performance-linked incentives;

Equity: ensuring that training reaches marginalized and older female staff in rural areas;

By adopting such an approach, the VWU can become not just a beneficiary of digital transformation, but a pioneer in gender-equitable digital governance in Vietnam.

#### 4. Conclusion

This study provides a comprehensive analysis of digital competence among Vietnam Women's Union staff, revealing critical gaps that hinder effective participation in national digital transformation and public sector reform. Key findings indicate significant disparities in digital skills across age groups, regions, and administrative levels, with grassroots staff exhibiting the most pronounced deficiencies in data management (only 15.1% proficient in tools like Excel or Google Sheets), cybersecurity, and online collaboration (72.3% lack confidence in tools like Zoom or Zalo). These gaps are exacerbated by systemic barriers, including inadequate ICT infrastructure, particularly in rural areas like Dak Lak and Lao Cai, and the absence of structured, tier-specific training programs. Gender-specific constraints, such as time poverty and technophobia among older female staff, further compound these challenges, underscoring the need for equitable interventions.

The policy implications of these findings are clear. First, the VWU should adopt a tailored digital competence framework, as proposed, to standardize skill expectations and guide training across administrative levels. This framework should prioritize practical, hands-on training modules customized for central, provincial, and grassroots staff, with a focus on data management, cybersecurity, and digital communication tools. Second, investments in ICT infrastructure, such as reliable internet and modern devices in rural offices, are essential to bridge the urban-rural digital divide. Third, to address gender-specific barriers, training programs should incorporate flexible schedules, mobile learning platforms (e.g., Zalo-based modules), and peer mentorship to empower female staff, particularly those over 45. Integrating digital skill development into career progression incentives could further enhance motivation and adoption.

Despite its contributions, this study has limitations. The sample, while diverse, may not fully represent all VWU regions, particularly remote northern highlands or southern coastal areas. Additionally, the reliance on self-reported data for digital competence may introduce bias, as staff may overestimate or underestimate their skills. The qualitative component, while rich, was limited to three provinces, potentially overlooking unique contextual factors elsewhere. Finally, the study did not assess the long-term impact of proposed interventions, which requires further investigation.

Future research should explore longitudinal effects of digital training programs on VWU staff performance and community outreach, particularly in underserved regions. Comparative studies across other socio-political organizations in Vietnam could provide broader insights into public sector digital transformation. Additionally, investigating the role of public-private partnerships in funding and delivering ICT infrastructure and training could offer scalable solutions. By addressing these gaps, the VWU can strengthen its digital capacity, enhance operational efficiency, and advance gender-equitable digital inclusion, ensuring no woman is left behind in Vietnam's digital future.

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