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DESIGN-REALITY GAP ANALYSIS: UTILIZATION OF THE SATUSEHAT SDMK PLATFORM IN FULFILLING NURSES' DIGITAL SKP

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Abstract

This study examines the use of SATUSEHAT SDMK for digital professional credit fulfillment among nurses in Denpasar, their digital literacy, and implementation barriers. A qualitative descriptive design involved nine nurses and three triangulation informants representing the Indonesian Nursing Collegium and provincial and municipal nursing associations. Data were collected through semi-structured interviews, workplace observations, and document review, then analyzed through data reduction, display, and conclusion verification using Heeks's seven ITPOSMO dimensions. Learning credits integrated with Plataran Sehat were consistently valued, whereas clinical service and community service credits required manual documentation, uncertain classification, and verification. Seven nurses identified peers as their main information source, and eight relied primarily on peers to learn the platform. Basic technical abilities and access to devices were adequate, but procedural understanding, feedback, and institutional support remained uneven. The largest interpretatively assessed gaps concerned information, processes, and management systems and structures. Mandatory use supported administrative compliance without demonstrating that competency development had become the primary motivation. Implementation improvement requires accessible official templates, clearer verification feedback, structured local assistance, protected administrative time, and gradual integration with electronic medical records. These findings describe a specific urban qualitative sample and do not estimate national prevalence.

Keywords: Digital literacy; E-government; Nurses; Professional credits; SATUSEHAT SDMK

INTRODUCTION

Digital transformation in healthcare changes how professional work is documented, coordinated, and evaluated. Its administrative dimension is particularly important for nurses because professional responsibilities extend beyond delivering care to maintaining evidence of competence and fulfilling licensing requirements. Moving these responsibilities into a digital platform can reduce fragmented records, but the availability of a platform does not itself establish that the associated work has become simpler. The relationship between technology, users, and organizational arrangements therefore deserves attention alongside technical functionality. Research on healthcare transformation emphasizes staff participation, communication, and the practical conditions under which digital systems are introduced (Wieslander et al., 2024). Reviews also identify infrastructure, technical difficulties, workload, and organizational support as relevant barriers and facilitators (Nascimento et al., 2023).

In the Indonesian policy setting examined in this study, SATUSEHAT SDMK provides a digital channel for managing health workforce information and fulfilling professional credits, known as Satuan Kredit Profesi (SKP). The legislative and administrative context discussed in the research includes Law Number 17 of 2023 on Health, Government Regulation Number 28 of 2024, and Minister of Health Decree Number HK.01.07/MENKES/1561/2024. Within that context, SKP fulfillment is connected to the renewal of professional practice permits, or Surat Izin Praktik (SIP). The administrative requirement gives nurses a concrete reason to use the platform. However, the policy purpose also concerns the maintenance of professional competence, creating a need to distinguish completion of licensing documentation from meaningful engagement with continuing professional development. The distinction becomes especially relevant because the digital SKP workflow comprises

different activity domains. Learning activities can be connected to Plataran Sehat, while clinical service and community service activities require their own forms of evidence. Nurses may therefore encounter different levels of automation within the same administrative system. A positive experience with automatically accumulated learning credits cannot establish that the full process, including document preparation and verification, operates effectively. Similarly, a nurse who can access an account and upload a file may still have difficulty identifying the appropriate activity category, interpreting a verification status, or understanding why an application has been returned. These questions concern the fit between administrative design and professional work.

Denpasar provides a setting in which nurses work across community health centers, hospitals, and clinics. This variation matters because the activities that can generate credits, the available organizational assistance, and the relationship with professional association branches may differ across workplaces. A common national platform can consequently be experienced through different local conditions. The study focuses on these experiences rather than treating nurses as a uniform group of technology users. It also examines institutional explanations alongside users' accounts, because communication failures and verification difficulties can be understood differently by the people submitting documents and those responsible for administering them.

Existing research establishes the relevance of digital competence and organizational readiness, but much of the relevant literature concerns clinical information systems, digital health adoption, or general government services. Hariyati et al. (2024) examine differences in nursing informatics competence, while Livesay et al. (2024) consider gaps between digital health practice and nursing education. Alotaibi et al. (2025) synthesize interventions and conditions affecting digital readiness. These studies inform the present investigation, but they do not substitute for an explanation of how nurses navigate a mandatory system for professional credit administration. A platform used because it is required for licensing presents questions that extend beyond willingness to adopt a technology voluntarily.

This study therefore examines three connected questions: how nurses use SATUSEHAT SDMK to fulfill digital SKP requirements; how they understand and apply digital literacy within that process; and what barriers arise during implementation. Heeks's (2006) design-reality gap framework provides the main analytical structure. The study contributes a qualitative account of how formal information channels, digital interfaces, documentary requirements, institutional coordination, and users' time interact in everyday administration. Its emphasis is on explaining implementation conditions and identifying improvements that follow from the reported evidence, without converting interview findings into population estimates or claims about clinical outcomes.

LITERATURE REVIEW

E-government and mandatory professional administration

E-government involves using digital technologies within public administration and its relationships with service users. Fang (2002) distinguishes forms of interaction that include government-to-citizen, government-to-business, government-to-government, and government-to-employee arrangements. The present study draws on the government-to-employee perspective to examine a government's digital relationship with a regulated health workforce. This is an analytical perspective on professional administration, not a claim that all participating nurses are government employees. The inclusion of nurses working in different types of healthcare facilities requires that distinction to remain explicit.

The value of an administrative platform should be considered in relation to the services and organizational processes it supports. Twizeyimana and Andersson (2019) discuss the public value of e-government in terms that extend beyond putting existing procedures online, including administrative efficiency and improved services. In professional credit administration, this directs attention to whether nurses can obtain reliable information, submit relevant evidence, understand decisions, and complete necessary work with reasonable effort. A platform can centralize records while leaving substantial preparation and coordination outside the system. Centralization and practical efficiency therefore need to be examined separately.

Mandatory use also changes the interpretation of participation. Account activity and completed submissions may show that nurses respond to licensing requirements, but these behaviors do not demonstrate satisfaction, voluntary acceptance, or achievement of the broader competency objective. Related research provides useful conceptual insights. Huo et al. (2025), in a different setting of public health policy compliance, discuss digital government and administrative burdens. Alhassani et al. (2024) examine healthcare professionals' compliance with electronic health record privacy policies. Their contexts differ from SKP administration, but both support attention to how users understand obligations and experience the conditions of compliance. Neither is treated here as direct evidence about nurses in Denpasar.

The ITPOSMO design-reality gap framework

Heeks (2006) explains implementation through the relationship between assumptions embedded in a system's design and the circumstances in which it operates. The ITPOSMO framework examines seven dimensions: information; technology; processes; objectives and values; staffing and skills; management systems and structures; and other resources. These dimensions make it possible to investigate a system as an arrangement of people, procedures, responsibilities, and resources as well as technical components. They are particularly useful when a platform remains in use despite recurring problems, because continued operation can coexist with substantial implementation gaps. For digital SKP administration, information concerns both official instructions and the practical knowledge circulating among nurses. Technology concerns access, interfaces, data consistency, and connections between systems. Processes cover the sequence from activity documentation to the verification of credits. Objectives and values address the relationship between competency development and users' reasons for complying. Staffing and skills concern technical capabilities, procedural understanding, and support needs. Management systems and structures concern responsibility, coordination, assistance, and decision making. Other resources include the devices, connectivity, money, and time needed to complete the work. This interpretation keeps the seven dimensions connected to observable features of the study setting.

The framework also allows gaps to be understood as interrelated. Unclear instructions can generate incorrect submissions, repeated revisions, and additional time demands. Weak coordination can increase dependence on informal assistance, while limited feedback can make successful peer examples more attractive than formal guidance. These relationships provide an interpretative structure for the findings; they are not statistical pathways tested by this research. Consistent with the qualitative design, the study classifies gaps as large or moderate through the researcher's synthesis of interview, observation, and documentary evidence. It does not assign numerical ITPOSMO scores or estimate a quantified likelihood of system failure.

Digital literacy beyond basic operation

Digital literacy provides a supporting perspective for distinguishing access and operation from understanding. Gilster (1997) places emphasis on understanding and using information in digital environments. The DigComp 2.2 framework describes digital competence through information and data literacy, communication and collaboration, digital content creation, safety, and problem solving (Vuorikari et al., 2022). These concepts indicate why familiarity with smartphones, electronic records, or online administrative systems does not necessarily ensure that a user can interpret a particular professional procedure. The present study uses digital literacy to interpret experiences within the ITPOSMO staffing and skills dimension; it does not administer a DigComp scale or classify participants through a validated competency score.

The relevant distinction in SKP administration is between knowing how to perform an operation and knowing which operation is appropriate. Compressing and uploading a document is a technical task. Deciding whether an activity belongs to clinical service or community service requires procedural interpretation. Determining whether a displayed credit total represents a preliminary calculation or a verified result requires an understanding of information and workflow. These abilities can overlap, but they are not interchangeable. Treating all difficulties as low digital literacy would obscure shortcomings in the instructions and categories that users must interpret.

The nursing literature supports a broader treatment of capability. Hariyati et al. (2024) discuss differences between nursing managers and staff in informatics competencies, and Livesay et al. (2024) identify challenges and needs connecting digital practice with nursing education. Alotaibi et al. (2025) emphasize interventions, barriers, and facilitators in healthcare digital readiness. These studies help position training and assistance as organizational responsibilities rather than assuming that prior exposure to technology is sufficient. Together, these perspectives support examining organizational conditions alongside individual characteristics. The age-related experiences reported in the present study must be considered within its narrow participant age range and the indirect nature of accounts about senior colleagues.

System quality organizational support and the research contribution

DeLone and McLean (2003) provide a supporting conceptual distinction between system quality, information quality, service quality, use, user satisfaction, and benefits. In this study, these ideas help separate the usability of an interface from the usefulness of the information and assistance surrounding it. They are not used as an additional model for hypothesis testing. A system may be easy to enter while still providing unclear status messages, and a centralized helpdesk may be available without consistently resolving a user's problem. Evaluating

these aspects separately is necessary to explain why participants can regard a platform as both helpful and burdensome.

Research on healthcare digital transformation also identifies the importance of staff participation and the fit between digital systems and work practices (Wieslander et al., 2024). Nascimento et al. (2023) discuss barriers involving technical conditions, workload, and organizational arrangements. In an Indonesian public administration setting, Widhiasthini et al. (2024) examine the implementation of a state civil apparatus information system in Bangli. These works provide relevant comparisons for communication, support, and documentary demands, while their different populations and systems limit direct transfer of their findings. The present study addresses the specific combination of mandatory professional administration, uneven automation across credit domains, and local support arrangements among nurses in Denpasar.

METHOD

Design setting and participant selection

The study used a qualitative descriptive design to examine nurses' experiences of fulfilling digital SKP requirements through SATUSEHAT SDMK in Denpasar. This approach was selected to explore how participants understood procedures, used the platform, dealt with difficulties, and obtained support in their work settings. It followed the orientation of qualitative inquiry toward contextual understanding and the researcher's role in collecting and interpreting data (Nasution, 2023). The ITPOSMO framework guided the interview and observation instruments and the organization of the findings.

Participant selection used purposive sampling to identify nurses with direct experience relevant to the research questions. The recruitment plan also allowed convenience sampling as an alternative when intended informants were inaccessible, unavailable, or unwilling to participate, while retaining relevance to the study criteria. Purposive selection was consistent with the need for experience-based information rather than statistical representation (Ahmed, 2024). The inclusion criteria specified at least a Diploma III nursing qualification, an active practice permit, experience of using SATUSEHAT SDMK for SKP administration for at least six months, active engagement with the system, and voluntary participation with written informed consent. Participants worked in healthcare facilities in Denpasar.

The final sample comprised nine nurse informants and three triangulation informants. The nurse group was aged 30–33 years and had 7–10 years of nursing experience. Seven held the professional Ners qualification, one held a Diploma IV qualification, and one held a Diploma III qualification. Tenure at their current institutions ranged from less than one year to six years. The triangulation informants represented the Indonesian Nursing Collegium, the Bali provincial board of the Indonesian National Nurses Association (PPNI), and its Denpasar municipal board. The sample included experiences from community health centers, hospitals, and clinics, without treating facility representation as a quantified comparison between groups.

Data collection and credibility

Data collection combined semi-structured in-depth interviews, workplace observations, and document review. Eight nurse interviews were conducted face to face and one was conducted online to accommodate the participant's work schedule. The interview guide explored official and informal information sources, platform use, credit submission and verification, professional motivations, digital skills, organizational support, and resource requirements. The semi-structured approach allowed participants to describe specific incidents and explain how they responded, while retaining a shared set of topics across the interviews.

Observations covered the working environments of the nine nurse informants using an ITPOSMO-based observation sheet. Relevant aspects included device and internet availability, access to assistance, written guidance, and the practical circumstances of platform use. Documentary sources included relevant regulations, technical guidance, professional association materials, and supporting documents supplied by informants. Submitted reports, verification comments, and a purchased reporting template were examined where described in the study findings. These sources helped compare formal requirements with participants' accounts of applying them.

Credibility was addressed through source triangulation and comparison across data collection techniques. Nurses' descriptions were compared with the perspectives of the Collegium and professional association informants, rather than assuming that institutional and user accounts would necessarily agree. Interviews were also compared with observations and documentary material. The researcher had a nursing background, which supported an understanding of professional terminology and work practices. The methodology described repeated review of the evidence and attention to consistency across sources as part of maintaining interpretative rigor (Sugiyono, 2023).

Data analysis and interpretation

Analysis followed the interactive sequence of data reduction, data display, and conclusion drawing and verification associated with Miles and Huberman, as presented by Sugiyono (2023). During reduction, material relevant to use, digital literacy, barriers, and support was selected and grouped. Data display organized the material into themes and relationships within the seven ITPOSMO dimensions. Conclusion verification involved checking interpretations against interview accounts, observations, and documentary evidence. Differences between informant groups were retained when they clarified a gap between formal arrangements and everyday experience.

Saturation was described as a principle for guiding the adequacy of information in the recruitment and analysis plan, rather than a fixed numerical target. The final achieved sample comprised nine nurses and three triangulation informants. Demographic values and explicit counts are used descriptively. Verification histories are presented as individual recollections, and the categories of gap magnitude remain interpretative judgments. The analysis does not estimate causal effects, test hypotheses, quantify digital literacy, or establish the prevalence of the reported barriers beyond the participants and settings examined.

RESULTS AND DISCUSSION

Information reaches nurses mainly through peers

All nine nurse informants recognized SATUSEHAT SDMK as the official digital channel for fulfilling SKP requirements. Awareness of the platform, however, did not produce a uniform understanding of its procedures. Seven identified colleagues as their principal source of information. Informal exchanges occurred through workplace conversations, messaging groups, and contacts in other facilities. Participants also searched the internet and followed social media content when they needed practical explanations. The timing of this information seeking frequently reflected the proximity of SIP expiry, suggesting that awareness of a mandatory system and sustained engagement with its requirements were different experiences.

The contrast between participants illustrates this distinction. IF-01, whose permit remained valid until 2028, had known of the system since around the middle of 2024 but did not describe the same urgency as nurses approaching renewal. IF-05 began actively seeking information because renewal was approaching and relied mainly on peers. IF-07 received an initial link through a hospital PPNI branch group, explored the menus independently, and searched online for further explanations. IF-03 and IF-09 described closer engagement with written guidance and professional association channels, consistent with their active involvement in the association. These cases indicate variation in the routes through which instructions became usable knowledge.

The institutional account was more formal. Triangulation informants described communication through the Collegium, the national PPNI board, provincial and municipal boards, and facility branches, known as Dewan Pengurus Komisariat (DPK). The municipal informant acknowledged that messages could become buried in group conversations and that the effectiveness of dissemination depended on the activity and responsiveness of local branches. Some nurses did not know their DPK or worked in settings without an active branch. Thus, the existence of a hierarchical communication pathway did not ensure that every user received, understood, and retained the information transmitted through it.

An important disagreement concerned the explanation for this gap. Institutional informants emphasized insufficient member awareness and delayed information seeking. Nurses also recognized that they sometimes looked for instructions only when renewal became urgent. However, IF-03 questioned an explanation centered only on user awareness, pointing to weakened communication and the difficulty of reporting problems after administrative centralization. The evidence supports retaining both perspectives: users' timing and attention mattered, but the practical availability of accessible guidance and responsive communication also shaped their ability to act. The study does not attribute the problem exclusively to individual motivation or exclusively to institutional failure.

In Heeks's (2006) framework, this is a gap between an assumed formal information flow and an operational reality that relies heavily on lateral exchange. Informal assistance helped nurses continue using the system, but it also made guidance dependent on another person's previous experience. Instructions that had worked before could become outdated when documentation requirements changed. The relevance of communication and staff participation is consistent with the healthcare transformation issues discussed by Livesay et al. (2024) and Wieslander et al. (2024). The practical implication is to connect peer networks to reliable official guidance, including concise explanations that can be accessed at the point of submission.

Technical access is adequate but system understanding remains uneven

Participants generally described the main interface as understandable when its instructions were read carefully. They could access the platform through workplace computers or laptops and personal smartphones. Basic login and navigation were not central barriers for this group. Forgotten passwords after changing devices were addressed through password recovery. These findings are consistent with participants' routine exposure to electronic records, personnel systems, attendance systems, and other digital work applications. The evidence therefore does not support describing the interviewed nurses as generally unable to operate technology.

Positive assessments of access coexisted with difficulties involving data consistency and the meaning of the interface. IF-02 recalled an early period in which professional status appeared incorrectly and accumulated credits were no longer visible. IF-01 described a synchronization problem that later resolved, and IF-05 reported differences between displayed totals that required repeated checking. IF-08 associated the disappearance of previously uploaded activities with a change in employment status during institutional restructuring. These are participants' accounts of experienced events, not results of a technical audit establishing the underlying cause. IF-09, by contrast, reported only a minor login problem that resolved on another attempt.

Changes to the dashboard also produced mixed responses. Some participants preferred the earlier visual summary, while others found the newer forms more detailed. Not all noticed the change at the same time, and some encountered it only when returning to the platform after a period of limited use. This variation indicates that an interface can improve in one respect while still requiring clearer communication about changes. It also shows why a single judgment of ease of use is insufficient. A participant may find the interface readable while remaining unsure whether a displayed credit balance has been verified or is still provisional.

Differences between facilities further shaped the interpretation of form labels. IF-03 found some categories familiar because they resembled community health center programs. Hospital and clinic informants described uncertainty about where particular nursing activities belonged. IF-05 submitted material under two similar menus in the hope that one would be appropriate. The issue was therefore not simply finding a button but relating actual professional activities to administrative categories. DeLone and McLean's (2003) distinction between system and information quality helps explain this result: operational access can be adequate while the information needed to make a correct submission remains insufficiently clear.

Credit domains have different levels of administrative integration

The most consistent positive finding concerned the learning domain. All nine nurses valued the connection between Plataran Sehat and their SKP records. They described participating in learning activities and having eligible credits accumulated without separately uploading certificates. Participants also appreciated the availability of free activities and opportunities to update their knowledge. IF-04 described the ability to learn beyond the immediate area of everyday practice. The benefit was both administrative and educational, although the research did not assess subsequent changes in competence or patient care.

The institutional perspective added a qualification to this positive experience. IFT-02 noted that a learning activity did not necessarily generate professional credits merely because it was free and completed. Participants needed to attend to the intended professional audience and eligibility conditions. The documentary review discussed this distinction between activities that contribute SKP and those that provide learning hours without the same credit recognition. Thus, automation reduced the work of recording eligible activities but did not eliminate the need to understand what counted. The participant accounts of convenience and the institutional concern about eligibility describe different parts of the same workflow.

Table 1 summarizes the contrast between the three credit domains. The comparison describes the experiences reported in the study, rather than a complete technical specification of the platform.

Table 1. Reported workflows and experiences across professional credit domains

Domain	Main workflow described	Main benefit or difficulty	Context affecting experience
Learning	Complete eligible activities through Plataran Sehat; credits accumulate through the connected system	Less separate certificate handling; eligibility still needs to be understood	Availability and professional relevance of learning activities
Clinical service	Compile activity or patient records, obtain authorization, select a category, upload evidence, and await verification	Unclear categories, inaccessible templates, revisions, and duplicate reporting	Relationship between routine records and the required reporting format
Community service	Identify eligible activities, assemble evidence, submit documents, and await verification	Uneven activity opportunities and incomplete understanding of evidence requirements	Routine programs and association or facility activities available to nurses

Source: Synthesis of nurse interviews, triangulation accounts, and documentary review.

Clinical service credits followed a less integrated process. Nurses described compiling patient or activity records, preparing a report, obtaining a supervisor's authorization, choosing the relevant form, compressing files where necessary, uploading the documents, and awaiting a decision. The more difficult step was often selecting the category or interpreting the required content rather than uploading the file itself. IF-07, for example, described uncertainty about classifying interventions by level. IF-02 had difficulty deciding how activities related to service and community programs should be categorized. These cases show how documentary administration can remain demanding even when the technical operation is familiar.

Several nurses perceived the acceptable format as inconsistent. They obtained examples from colleagues, revised reports after rejection, and sometimes found that a format accepted for one person was not accepted for another. The Collegium informant offered an important counterpoint: a national format already existed in the professional development guidance. From that perspective, the difficulty concerned users' failure to consult or follow the guidance, rather than the complete absence of standards. The study therefore identifies a problem of accessibility, interpretation, and application. It does not conclude that there was no national reporting format.

The document examined for IF-05 illustrates why this distinction matters. The report contained institutional identification, the nurse's identity and practice permit details, a reporting period, summarized nursing activities, and a leadership signature. Nevertheless, the rejection message requested elements that the participant believed were already included. IF-05 described obtaining different examples from peers and eventually receiving approval after providing a more detailed version. This case does not establish that all rejection decisions were incorrect. It shows that a general message can leave a user unable to identify what needs revision, even when the user has made a substantive attempt to meet the stated requirements.

Community service introduced another source of variation. The three community health center nurses explicitly identified in the findings, IF-01, IF-02, and IF-03, could draw on routine programs and related activities. Hospital participants described opportunities through institutional activities or health promotion programs. Clinic participants IF-04 and IF-05 had fewer routine opportunities and depended more on periodically organized activities or information from outside the workplace. The administrative requirement was shared, but access to the activities needed to meet it was not experienced in the same way. No facility-level prevalence or average burden can be estimated from these accounts.

Participants also described learning about more detailed community service evidence requirements only after a submission was returned. Documentation could include an assignment letter or activity report, attendance records, and photographs, rather than a certificate alone. The Collegium informant linked stricter checking to concerns about document authenticity. That explanation must remain attributed to the informant; this study did not measure fraudulent submission rates. The implementation issue is that users relying on earlier peer experiences could prepare incomplete evidence without recognizing that expectations had changed. Reconstructing documentation after an activity had taken place created additional work and uncertainty.

Verification timing and feedback influence how nurses organize submissions

Two broad patterns of platform engagement were described. IF-02, IF-03, IF-07, and IF-09 reported relatively regular attention to submissions or checking after activities, although frequency differed by domain. IF-04, IF-05, IF-06, and IF-08 described more episodic use connected to approaching permit renewal. IF-01 had submitted clinical service evidence annually but still experienced a long interval before approval. These patterns should not be interpreted as fixed behavioral categories or a validated typology. They describe the timing discussed in the interviews and help explain why the same verification process could create different expectations.

Three recalled verification histories are presented in Table 2. The dates are retained as individual accounts so that they are not mistaken for a calculated average or a platform service standard.

Table 2. Selected verification histories recalled by nurse informants

Informant	Submission recalled	Verification or approval recalled	Interpretation boundary
IF-01	June 2024	April 2025	One reported submission history; not an average waiting time
IF-08	October 2024	April 2025	One reported submission history; not a sample-wide duration
IF-04	September 2025, community service evidence	May 2026	The informant described a wait of approximately eight months

Source: Individual interview recollections; these dates were not derived from administrative time logs.

IFT-03 explained that requesting verification was linked to a practice permit approaching expiry and to provisional fulfillment across the required domains. This explanation qualifies the interpretation of a long interval between upload and approval: upload timing and eligibility to request verification are not necessarily the same event. At the same time, users did not always understand that distinction. IF-04 described receiving faster approval for a later service submission and hearing advice to submit closer to the renewal deadline. The evidence suggests that the timing and visibility of verification rules can shape users' practical strategies, but it does not establish that late submission improves approval outcomes generally.

Revision feedback was another recurring concern. Nurses and the municipal association informant described comments that indicated a problem without clearly identifying the specific activity, document element, or correction required. When users could not translate a message into a corrective action, they returned to peers for examples. The cycle linked information and process gaps: unclear requirements encouraged uncertain submissions, while unclear feedback made revisions dependent on informal interpretation. Heeks's (2006) framework is useful here because it directs attention to the entire sequence rather than treating every rejection as an isolated user error.

Transparent feedback would also help separate concerns about correctness from speculation about verification integrity. Some nurses questioned how the authenticity of similar-looking submissions was checked. Their questions reflect limited visibility of the review process, not proof that invalid documents were routinely approved. The Collegium informant emphasized the purpose of verification in identifying unacceptable evidence. The appropriate implication is clearer explanations of document requirements, decision status, and revision reasons, rather than a conclusion about the prevalence or effectiveness of fraud detection that the study did not measure.

Administrative compliance is more prominent than the competency objective

When asked why they needed to fulfill SKP, all nine nurses first connected the requirement to practice permit renewal. Some subsequently discussed benefits for professional learning, and IF-03 explicitly related SKP to updating knowledge and improving professional practice. The dominant initial explanation nevertheless concerned maintaining permission to work. This finding indicates the importance of licensing requirements as a motivation within the sample. It does not establish that nurses lacked professional commitment or that their learning activities had no educational value.

Participants' evaluations were also conditional on the domain being discussed. They valued reduced certificate handling and easier access to learning activities. However, clinical service reporting could still feel like additional work because evidence had to be prepared outside the platform and might be returned for revision. The same user could therefore appreciate the learning integration while remaining dissatisfied with the manual submission process. This is consistent with examining public value through the practical effects of administrative services rather than participation alone (Twizeyimana & Andersson, 2019).

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The gap between formal objectives and users' dominant motivation was categorized as moderate. The system was used, and nurses recognized some benefits, but competency maintenance was less prominent than administrative necessity in their first explanations. In the terms of Heeks (2006), organizational objectives and users' immediate goals were only partly aligned. Improving that alignment requires both communicating the relationship between SKP and professional development and reducing avoidable administrative effort. Communication about competence is unlikely to be sufficient if the everyday experience remains dominated by uncertain documentation and verification.

Procedural literacy depends on informal learning and assistance

Within the staffing and skills dimension, eight of the nine nurses identified peers as their main source for learning how to use the platform. This count concerns learning the procedures and differs from the seven who identified peers as their main source of initial information. Nurses commonly tried a task themselves, consulted a colleague who had already completed it, and sought institutional assistance only if the problem remained unresolved and they knew an appropriate contact. Such learning supported continuity of use, but the knowledge exchanged often concerned how to obtain an accepted submission rather than the rationale underlying a requirement.

The distinction between technical and procedural capability was especially clear in the interpretation of forms and verification status. Participants could access accounts and manipulate files, yet uncertainty persisted about activity classification and the meaning of displayed information. Written guidance was more visible to informants active in PPNI. IF-05 had received a lengthy guidance document but still preferred asking colleagues because of limited time and difficulty matching the document to specialized clinic work. This example supports an interpretation that includes the accessibility and relevance of guidance, rather than attributing the difficulty only to a lack of willingness to read.

Nurses also described differences in capability among their colleagues. Some younger nurses reported assisting senior colleagues or taking over parts of their SKP administration, creating additional work alongside their own responsibilities. These accounts concern participants' experiences of providing assistance. Senior nurses were not directly interviewed, and the study cannot establish an independent age effect on competence. Indeed, clinic participants described more similar capabilities within their relatively age-homogeneous workplaces. The appropriate finding is that support needs were uneven and could be met through informal delegation, with consequences for the people providing that assistance.

These observations complement the broader attention to digital readiness and support in Alotaibi et al. (2025). Training that focuses only on basic operation would not address all the difficulties described here. Relevant assistance would connect the professional activity, the evidence required, the submission category, and the interpretation of the result. Informal peer support should be recognized and supplied with current information, while maintaining each nurse's understanding of their own professional obligations. This would preserve a useful support network without assuming that technically capable colleagues can absorb additional administrative work indefinitely.

Centralized administration continues to depend on local coordination

Support differed across workplaces. Community health center participants described institutional or health-office arrangements for training and opportunities to participate in programs relevant to credits. Clinic participants described personnel reminders about permit renewal and periodic institutional activities. Hospital experiences varied with the functioning of DPK and management support. IF-07 described an active local branch, while IF-09 served as an information source for colleagues. IF-08 reported that assistance had weakened following an institutional change, leaving uncertainty about whom to approach. These differences show that access to the same platform did not create equal access to help.

Structured, continuing training specifically on platform use was not described as a common provision. This finding should be distinguished from the informal assistance, reminders, and activity opportunities that some participants did receive. Observations also identified an absence of written platform guidance in the visited workplaces. The organizational gap therefore concerned the reliability and clarity of support arrangements, not the complete absence of all local assistance. A nurse could have access to a helpful colleague or active DPK without having a designated service responsible for resolving a problem from start to finish.

The municipal PPNI informant described coordination through 29 local branches and the continuing task of gathering problems, forwarding them through the organizational hierarchy, and relaying responses. Messages were handled through group conversations and manual follow-up. The Collegium informant acknowledged dependence on the professional association's territorial structure despite centralized verification. This arrangement helped

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maintain communication, but responsibilities and authority were not aligned: local intermediaries could explain or forward a problem without being able to change a verification decision or repair the platform.

The same limitation applied to technical problems. IFT-03 stated that the verification team operated as a user of the system and had to escalate technical issues through the Indonesian Health Council to the relevant information technology function. Nurses and association informants described helpdesk responses as slow or overly general in some instances. These accounts support concern about the usefulness and continuity of feedback, but the study did not interview helpdesk personnel or assess their full service records. Institutional explanations and users' experiences should therefore inform improvement together rather than be treated as a complete performance audit of the support service.

Regarding verification capacity, IFT-03 reported 36 verifiers serving submissions nationally and stated that the team relied on the professional development guidance without a separate detailed standard operating procedure or job description. This is an institutional informant's account, not an independently verified workforce census. The same informant described flexible task allocation and efforts to complete applications, while also acknowledging that complaints were not systematically recorded by type and number. Such accounts suggest a need to make work arrangements and feedback more explicit. A small number of complaints reaching the association cannot, by itself, establish that problems are rare, because some nurses resolve difficulties through peers or never report them formally.

Time remains a constraint despite adequate devices and connectivity

Devices and connectivity were available across the observed settings, and participants could also use personal smartphones. A minor difference in connection quality between rooms was described without being regarded as a major obstacle. Participants did not generally characterize formal training or seminar costs as burdensome because institutions supported some activities and free learning opportunities were available. These findings are specific to the urban workplaces examined. They do not establish that infrastructure and financial conditions are adequate in rural settings or throughout Indonesia.

Time presented a different pattern. Preparing reports, waiting for verification, interpreting revisions, and repeating submissions competed with clinical and other administrative duties. IF-04 described completing service summaries at home. Nurses who helped colleagues could also carry additional work that was not visible in their own account records. However, experiences were not uniform: IF-09 found report preparation manageable because the relevant information was already recorded in daily work. The study therefore identifies how work organization and usable routine data can influence the effort required, rather than assuming that every nurse experienced the same burden.

An unofficial reporting template purchased by IF-07 for Rp10,000 illustrates an additional resource issue. The document was examined in the study, but the participant had not yet tested it through a submission. Its purchase should not be presented as evidence of successful verification or as the cost normally paid by nurses. It shows that difficulty finding an accessible official format can create a small private expense. Alongside time spent on revisions and assistance, this case supports considering the resources used by end users, not only the formal operating costs of the platform. The relevance of workload and time is consistent with the barriers discussed by Nascimento et al. (2023).

The seven dimensions reveal connected implementation gaps

The overall synthesis identified large gaps in information, processes, and management systems and structures. Technology, objectives and values, staffing and skills, and other resources were categorized as moderate. Table 3 retains the qualitative character of these assessments. The categories reflect the researcher's interpretation of the breadth and significance of the findings; they are not scores derived from a scale, statistical comparisons, or estimates of failure probability.

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Table 3. Qualitative synthesis of the ITPOSMO implementation gaps

ITPOSMO dimension	Gap category	Main basis in the findings
Information	Large	Formal dissemination did not consistently provide usable guidance; peers and social media filled gaps in understanding.
Technology	Moderate	Access and learning integration worked, while synchronization, status interpretation, and service-data integration remained problematic.
Processes	Large	Category selection, documentary preparation, revisions, and uncertain verification complicated the manual domains.
Objectives and values	Moderate	Licensing requirements motivated use more prominently than the competency objective, despite recognized learning benefits.
Staffing and skills	Moderate	Basic technical ability was adequate, but procedural understanding and support needs varied; some nurses assisted colleagues.
Management systems and structures	Large	Centralized administration depended on uneven local assistance and intermediaries with limited authority to resolve problems.
Other resources	Moderate	Devices and connectivity were adequate, but users devoted personal time and sometimes money to completing administration.

Source: Interpretative synthesis of study findings using Heeks (2006); categories are qualitative.

The relationship between the dimensions is as important as their separate classification. Difficulty obtaining usable guidance affected form selection and documentary preparation. Unclear feedback extended revisions and encouraged another search for successful peer examples. These activities consumed time and reinforced reliance on informal assistance. Limited integration with existing clinical records sustained the need to prepare separate reports. This connected interpretation explains why a technically accessible system can still be experienced as administratively demanding. It describes a pattern in the evidence rather than a tested causal model.

At the same time, several conditions supported continued use: the requirement to maintain a valid practice permit, automatic accumulation of eligible learning credits, free learning opportunities, existing technical familiarity, peer cooperation, active DPK in some facilities, and the work of verifiers. Heeks (2006) emphasizes that implementation gaps must be understood alongside the forces that keep a system operating. The present findings therefore do not justify labeling the platform a total failure. They indicate partial realization of administrative benefits and continuing difficulty aligning procedures, support, and the competency purpose of professional development.

Practical priorities follow from the reported barriers

The improvements proposed by participants and supported by the findings concern both system design and local implementation. The first priority is to make official information actionable: provide downloadable formats, explain the activities appropriate to each category, indicate the relevant professions, and communicate changes when users need them. The issue is not simply producing another large guidance document. The evidence points to the need for consistent explanations connected to the actual tasks performed in community health centers, hospitals, and clinics. Table 4 summarizes the main recommendations and the responsibilities discussed in the research.

Table 4. Implementation priorities derived from the findings

Area requiring improvement	Recommended action	Relevant actors
Reporting requirements	Provide free official templates and concise examples by facility and activity type; clarify categories and required evidence.	Platform administrators, the Collegium, and healthcare facilities
Verification and feedback	Clarify status displays, communicate expected service times, and provide specific revision reasons linked to the submitted evidence.	Verification authorities and platform administrators

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Area requiring improvement	Recommended action	Relevant actors
Local assistance	Define contact persons and escalation routes; support active DPK and structured guidance for nurses who need assistance.	Facilities, health offices, PPNI, and verification authorities
Workload and records	Provide protected time for SKP administration and maintain personal and institutional supporting records.	Facility leaders and nurses
Integration and learning from problems	Develop gradual connections with electronic medical records while clarifying categories; record recurring complaints systematically.	Platform administrators, facilities, and relevant technical and verification functions

Source: Synthesis of participant recommendations and implications of the study findings.

Integration with electronic medical records was a recurring aspiration. Nurses wanted activities already recorded during care to support credit administration without separate compilation. The institutional informant also described integration as a development direction, and the documentary discussion referred to the SATUSEHAT SDMK roadmap for 2025–2029 (Peta Jalan SATUSEHAT SDMK 2025–2029, 2025). In the findings, this remained a planned improvement rather than a demonstrated feature operating consistently across the service domain. Its potential value should therefore be presented as a recommendation, not as an observed reduction in workload.

Integration also needs to accompany procedural clarification. Automating ambiguous categories or inconsistent rules would not resolve the interpretation problem. The same principle applies to a participant's suggestion that automated tools could assist preliminary document checking: this was a proposal for consideration, not an intervention implemented or evaluated by the research. Immediate improvements can focus on clearer categories, accessible formats, specific feedback, and acknowledged local support. These actions address the gaps that already appear in the evidence while longer-term technical development proceeds.

Limitations and scope of interpretation

The nine nurse informants were aged 30–33 years and actively operated the platform themselves. Their experiences therefore provide limited insight into nurses who depend entirely on others for digital administration. Accounts involving senior colleagues were indirect and should not be used to generalize about older nurses or infer that age caused digital difficulties. The urban setting and adequate devices and connectivity also limit transfer to settings with different infrastructure and staffing conditions.

The triangulation informants represented the Collegium and professional associations. The Ministry of Health, the Indonesian Health Council, helpdesk staff, and facility leaders were not interviewed directly. Explanations of central system management and helpdesk performance consequently reflect user accounts, the included institutional perspectives, and documents. Some technical incidents occurred during the earlier implementation period, while the platform continued to change. Verification histories also relied partly on participants' recollections rather than a comprehensive dataset of submission and approval timestamps.

Finally, the ITPOSMO gap categories were interpretative judgments. They support prioritization within this qualitative account but do not establish measured distances between dimensions or prevalence in a wider population. Future research could include senior and assisted users directly, examine different geographical settings, involve the administrative and technical actors not represented here, and compare experience after further system integration. Participatory assessment with relevant stakeholders could also test whether the proposed priorities address the problems experienced by different user groups.

CONCLUSION

SATUSEHAT SDMK was used by the nurses in this study to fulfill digital SKP requirements, but the benefits differed across activity domains. Integration with Plataran Sehat reduced separate certificate administration for eligible learning activities. Clinical service and community service remained more dependent on manual documentation, category interpretation, and verification. Basic technical capability and access to devices were adequate within the sample, whereas procedural understanding and access to reliable assistance remained uneven.

The largest qualitative gaps concerned information, processes, and management systems and structures. Peer networks and local professional association branches helped sustain use, but their support was not consistently

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matched by clear responsibilities, accessible guidance, or authority to resolve problems. Licensing requirements remained the most prominent initial reason for compliance, while the competency objective was less visible in participants' explanations. These findings support improvements to official templates, verification feedback, local assistance, protected administrative time, and gradual integration with existing records. The study offers a contextual explanation of implementation among the interviewed nurses in Denpasar, with implications that require examination in other settings rather than automatic generalization.

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