

EXPLORING THE NEED FOR REFLECTIVE JOURNAL AS ASSESSMENT-AS-LEARNING IN A GOVERNMENT LMS: A STUDY OF BPOM EMPLOYEES

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Keyword

reflective journal, assessment as learning, self-regulation, LMS, government employees

Abstract

The advancement of digital learning in government institutions calls for assessment models that go beyond summative testing and foster self-regulated learning. These preliminary needs analysis investigates the perceptions and learning needs of employees at the National Agency of Drug and Food Control (BPOM) regarding the development of a reflective journal as an assessment-as-learning feature within the LMS IDEAS. Using a quantitative approach, the study involved 85 active LMS users who responded to an online questionnaire. The results indicate that while current assessments such as pre- and post-tests are perceived as clear and relevant, they are considered insufficient in promoting key aspects of self-regulated learning—namely self-monitoring, evaluation, and adaptation. Respondents expressed strong needs for additional features such as personalized feedback, structured reflection tools, and mechanisms that connect learning with workplace practices. These findings suggest that integrating a reflective journal with guided prompts and flexible formats into the LMS has the potential to enhance autonomous learning and support continuous professional development among civil servants.

INTRODUCTION

The digital transformation of professional learning in government institutions has led to the widespread adoption of Learning Management Systems (LMS) as platforms for structured training and continuous development. In Indonesia, the National Agency of Drug and Food Control (BPOM) developed the LMS IDEAS as a web-based system aimed at improving employee competencies across its organizational units. Although the LMS has successfully delivered learning modules, its evaluation system predominantly emphasizes summative assessments—such as pre-tests and post-tests—which may not sufficiently promote long-term learning and self-awareness (Panadero et al., 2017; Black & Wiliam, 2009; Andrade, 2010).

This emphasis on summative assessment highlights a key gap in digital learning: the absence of formative and reflective approaches that support learners in regulating their own learning (Andrade, 2010; Carless & Boud, 2018). Civil servants, particularly those engaged in technical and regulatory functions, are expected not only to comprehend training content but also to apply it in complex, dynamic, and high-stakes work environments (Kraiger, Malvezzi, & DeRouin, 2020). Developing the ability to self-regulate—through planning, monitoring, evaluating, and adapting one's learning—is therefore essential (Zimmerman, 2002; Wang, 2017). However, many LMS platforms, including IDEAS, currently lack integrated tools to scaffold these processes effectively (Ifenthaler & Yau, 2020; Lew & Schmidt, 2011).

Self-regulated learning (SRL) is defined as a cyclical process in which learners set goals, monitor progress, apply learning strategies, and reflect on outcomes (Zimmerman, 2002; Butler & Winne, 1995). However, most LMS platforms, including IDEAS, do not provide integrated tools to systematically support these behaviors (Ifenthaler & Yau, 2020; Lew & Schmidt, 2011). Previous studies have emphasized that structured support—such as prompts for planning, monitoring, and reflection—can significantly enhance SRL in digital environments (Panadero et al., 2017; McGuire & McGuire, 2015).

One promising strategy to embed SRL into learning systems is the use of reflective journals. Within the framework of assessment-as-learning, reflective journaling encourages learners to evaluate their understanding, identify obstacles, and connect learning to real-world practice (Earl, 2013; Boud, Keogh, & Walker, 1985; Lew & Schmidt, 2011). Despite its documented benefits in higher education and professional learning, reflective journaling remains underutilized in government LMS platforms (Wang, 2017).

This study addresses the above gap by conducting a preliminary needs analysis among BPOM employees to identify their perceptions of existing assessment practices and their expectations for reflective tools. Using a quantitative method, this study aims to examine how current LMS assessment mechanisms relate to self-regulated learning behaviors and to explore the potential demand for a structured reflective journal feature. The findings are expected to inform the design of digital tools that support assessment-as-learning and promote deeper, more autonomous learning experiences in the public sector.

METHOD

This study employed a quantitative descriptive design as part of the preliminary needs analysis in a broader research and development (R&D) initiative. The purpose was to investigate BPOM employees' perceptions of current assessment practices in the LMS IDEAS, their self-regulated learning behaviors, and their expectations for a reflective journal feature that could be integrated as an assessment-as-learning tool.

A total of 85 employees of the National Agency of Drug and Food Control (BPOM) participated in the study. All participants were selected through purposive sampling, with the main criterion being their status as active users of the LMS IDEAS. Participants had recently completed learning modules through the platform and were therefore considered capable of providing relevant and informed responses.

Data were collected in June–July 2025 using an online questionnaire distributed via Google Forms. The questionnaire consisted of three sections:

1. Perceptions of current assessment practices (Section A)
2. Self-regulated learning behaviors (Section B)
3. Expectations for reflective journal features (Section C)

All items were measured using a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The instrument was developed based on existing literature on self-regulated learning and assessment-as-learning (Zimmerman, 2002; Earl, 2013; Panadero et al., 2017).

To ensure ethical compliance, the questionnaire included an informed consent section on the first page. Participation was voluntary, and respondents were required to confirm their willingness to participate by selecting “Yes” before proceeding to the questions. They were also informed that their responses would be kept confidential and used exclusively for academic purposes.

The collected data were analyzed using descriptive statistics, including frequencies, percentages, means, and standard deviations, to identify general patterns and trends. The analysis focused on understanding the strengths and gaps in current assessment practices and the degree of alignment between these practices and employees' self-regulated learning processes and reflective needs.

RESULTS

The questionnaire was completed by 85 active users of the LMS IDEAS. The analysis focused on three domains: perceptions of current assessment practices (Section A), experiences with self-regulated learning (Section B), and expectations for reflective journaling features (Section C). Descriptive statistical analysis was conducted using mean and standard deviation (SD), and results are displayed in Figures 1 to 3.

1. Perceptions of Current Assessment Practices (Section A)

Figure 1 illustrates participants' perceptions of current assessment practices on the LMS IDEAS platform, particularly the pre-test and post-test features. The items evaluate clarity of instructions, relevance to job tasks, the extent of reflection and self-evaluation encouraged, and the overall usefulness of these assessments in supporting autonomous learning.

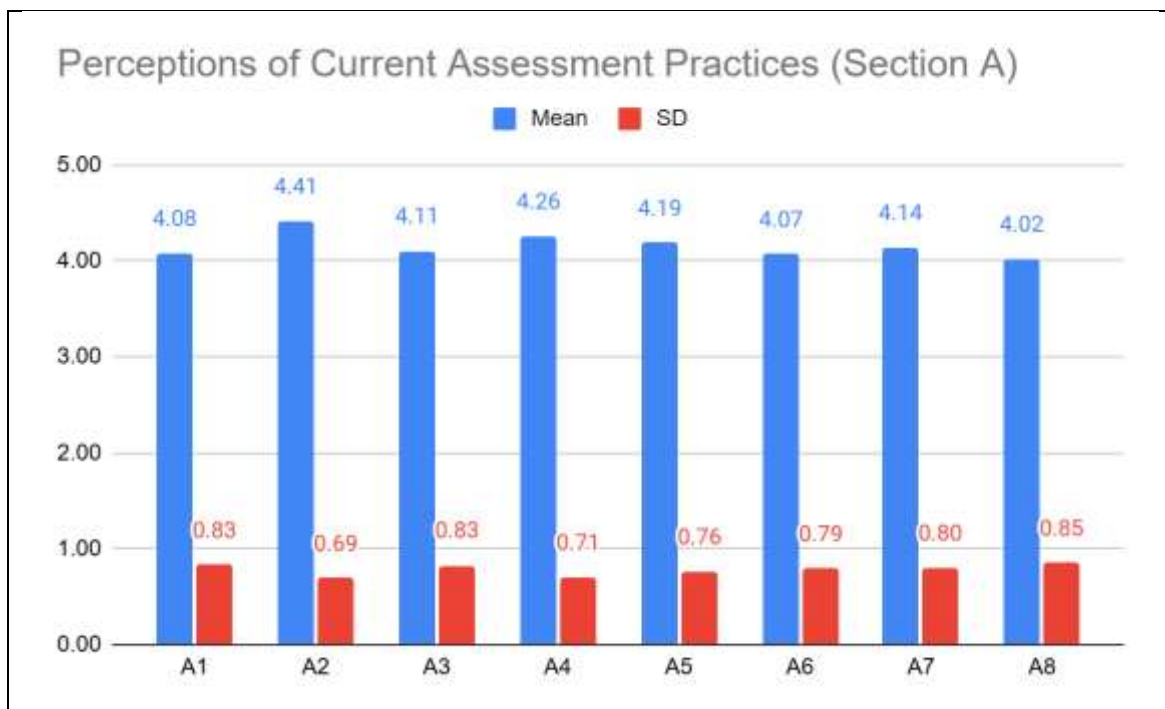


Figure 1. Perceptions of Current Assessment Practices in LMS IDEAS (Section A)

Across eight items (A1–A8), the mean scores ranged from 4.02 to 4.41, indicating a generally positive perception of the pre-test and post-test features currently implemented. The highest mean score (4.41) was found in A2, which indicates that respondents perceived the test instructions to be clear and easy to understand. Other relatively high responses included A4 (M = 4.26) and A5 (M = 4.19), suggesting that assessment activities encouraged deep thinking and helped users evaluate their understanding.

Despite these strengths, items related to the impact of assessments on self-regulation (A6 = 4.07) and independent learning support (A7 = 4.14) scored slightly lower. Standard deviations ranged between 0.69 and 0.85, indicating moderate agreement among respondents.

2. Self-Regulated Learning (Section B)

Figure 2 presents findings from 12 items (B11–B34) designed to assess the levels of self-regulated learning (SRL) among employees. This figure presents the mean and standard deviation for items grouped into three aspects: Planning (B11–B14), Monitoring (B21–B24), and Reflection (B31–B34). The results highlight tendencies in planning, tracking, and adjusting learning behaviors in relation to LMS activities.

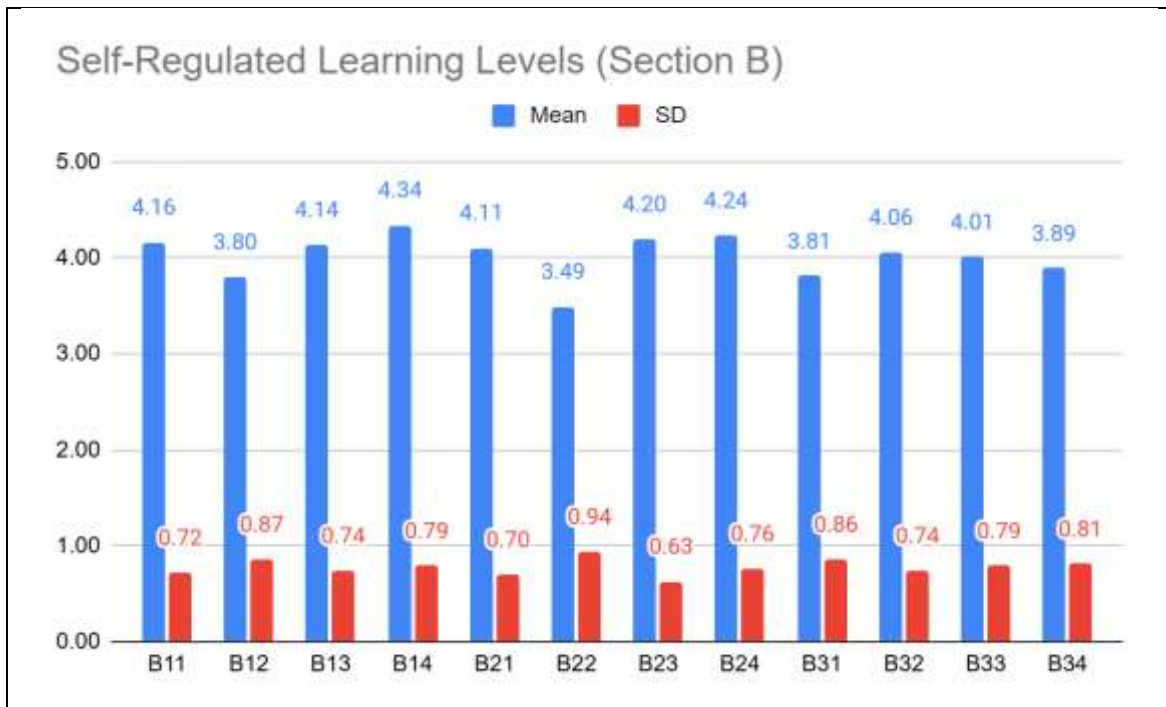


Figure 2. Levels of Self-Regulated Learning Among LMS IDEAS Users (Section B)

a. Planning

Planning items measure how participants prepare and orient themselves before starting learning tasks. The highest mean in this category was B14 ($M = 4.34$), indicating that most participants evaluate the relevance of modules before engaging in learning. Other strong scores were observed in items such as B11 ($M = 4.16$) and B13 ($M = 4.14$), reflecting proactive behaviors like setting learning goals and preparing necessary materials.

b. Monitoring

This subscale assesses how learners track their own learning progress and adapt strategies. Monitoring-related items showed high scores, such as B23 ($M = 4.20$) and B24 ($M = 4.24$), indicating that most users are aware of their progress and able to adjust their strategies. The item received the lowest average score in monitoring was B22 ($M = 3.49$). This suggests that while some respondents engage in self-monitoring, a significant portion may not consistently track their own learning progress

c. Reflection and Evaluation

This section captures how learners reflect on their achievements, identify areas for improvement, and learn from the experience. The lowest mean in the entire section was B31 ($M = 3.81$), suggesting that documenting and evaluating learning outcomes is not yet consistently practiced. However, items like B32 ($M = 4.06$) and B33 ($M = 4.01$) show that some degree of reflection and post-task evaluation does occur. Overall, while planning and monitoring skills are well developed, reflective practices appear to be less embedded and represent a development opportunity.

3. Needs for New Learning Support Tools (Section C)

Figure 3 shows that the need for enhanced learning support tools is significantly pronounced. This figure displays the expressed needs of respondents for additional support tools within LMS IDEAS. Key areas include structured reflective tools, personal feedback mechanisms, mentoring opportunities, and reminders to evaluate learning strategies. The findings support the demand for a reflective journal feature to enhance learning transfer and self-awareness.

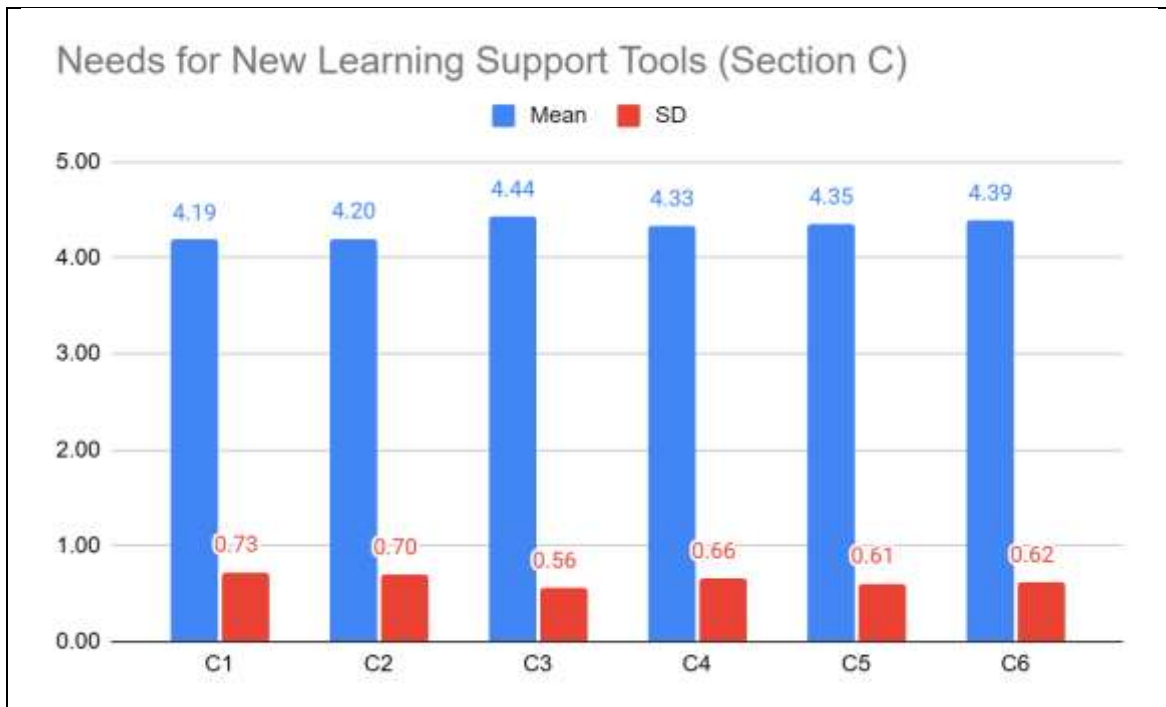


Figure 3. Needs for New Learning Support Tools in LMS IDEAS (Section C)

All six items in Section C scored above 4.19 in mean, with C3 ($M = 4.44$) as the highest. C3 emphasizes the need for more personalized feedback on the learning process. C6 ($M = 4.39$) and C5 ($M = 4.35$) reflect strong demand for structured reflection guidance and periodic reminders for evaluation. Items C1 and C2, which relate to the need for tools that support application of learning to workplace tasks and reflection on learning obstacles, also scored highly ($M = 4.19$ and 4.20 respectively).

Standard deviations were the lowest in this section ($SD = 0.56$ to 0.73), indicating a high level of agreement on the perceived needs. These findings clearly point to the importance of designing additional features within LMS IDEAS that foster reflective learning, personal feedback mechanisms, and guided self-assessment.

To synthesize the insights from all three sections of the questionnaire, Table 1 presents a consolidated summary of the key findings, outlining the relationship between current assessment practices (Section A), self-regulated learning behaviors (Section B), and the expressed expectations for additional reflective tools (Section C).

Table 1. Summary of Questionnaire Results Across Sections A, B, and C

Section	Focus Area	Key Findings	Implications
A	Perceptions of Assessment Practices	Participants positively perceive current assessments as clear and useful.	Existing assessments support basic evaluation, but do not fully promote reflection.
B	Self-Regulated Learning (SRL)	Planning and monitoring are strong; reflection and evaluation are weaker.	Learners are proactive, but need structured support for reflection and evaluation.

Section	Focus Area	Key Findings	Implications
B1	Planning	Learners prepare and set goals before engaging with content.	LMS content motivates learners to engage purposefully.
B2	Monitoring	Learners self-track progress and manage time effectively.	SRL strategies are applied during learning.
B3	Reflection & Evaluation	Some reflection occurs, but limited documentation and deeper evaluation.	Need for tools that prompt and guide meaningful post-learning reflection.
C	Needs for Reflective Support Tools	Strong agreement on the need for reflection aids and personalized feedback.	Users demand tools for structured reflection, evaluation, and feedback integration.

The table provides an integrated perspective that reveals a consistent trend: while existing assessments offer some value, they fall short in fully supporting self-directed learning and professional application. This gap highlights the relevance of introducing structured, reflective features—such as journals—into LMS IDEAS to better meet the learning and developmental needs of BPOM employees.

DISCUSSION

The findings of this quantitative study provide a compelling picture of the strengths and gaps in the current assessment practices and self-regulated learning (SRL) behaviors of BPOM employees using the LMS IDEAS. While respondents generally rated the existing pre- and post-tests as clear and relevant ($M = 4.02\text{--}4.41$), these forms of assessment were not perceived as sufficient in supporting deeper cognitive and metacognitive engagement, particularly in areas related to self-monitoring, self-evaluation, and adaptation—core components of SRL (Zimmerman, 2002; Butler & Winne, 1995).

This result aligns with concerns raised by Black and Wiliam (2009), who argue that summative assessments, while important for measuring achievement, rarely serve to improve learning processes in real time. Panadero, Jonsson, and Botella (2017), in their meta-analytic review, found that self-assessment and reflective tools significantly enhance both self-efficacy and self-regulated learning behaviors, particularly in adult learners. Therefore, the LMS IDEAS' current reliance on static assessments potentially limits learners' ability to engage in meaningful self-reflection and continuous improvement.

The relatively high scores in planning and monitoring domains (e.g., $B14 = 4.34$; $B24 = 4.24$) indicate that BPOM employees already exhibit proactive learning behaviors, such as setting goals, evaluating relevance, and tracking their progress. This reflects characteristics of adult learners in workplace settings, who often approach learning with clear performance intentions (Kraiger, Malvezzi, & DeRouin, 2020; McGuire & McGuire, 2015). However, the lower scores in the reflection and evaluation subdomain (e.g., $B31 = 3.81$) point to a missing structural component that could guide learners in processing their experiences more deeply.

Lew and Schmidt (2011) highlight that without guided reflection, learners are less likely to engage in higher-order thinking or to link learning content with their actual work tasks. This gap is critical in government contexts where civil servants must continually apply complex and updated knowledge in dynamic regulatory environments. In such contexts, reflection is not a

luxury but a necessity for transferring knowledge into decision-making and professional action (Klein, Noe, & Wang, 2019).

The strongest signal from this study appears in Section C, where all items scored above 4.19, with particularly high means for personalized feedback (C3 = 4.44), structured reflection prompts (C6 = 4.39), and reminders for periodic self-evaluation (C5 = 4.35). These findings support Earl's (2013) concept of *assessment-as-learning*, in which assessment becomes a process for learners to reflect, monitor progress, and adjust their strategies over time. In this model, the learner is an active participant, not merely a recipient of evaluation outcomes.

Furthermore, the demand for features that bridge learning with real-world job performance resonates with the findings of Carless and Boud (2018), who argue that feedback and reflection must be designed to support not just academic mastery but practical competence. The absence of such features within LMS IDEAS suggests a design gap that could be addressed through the integration of a reflective journal tool, which combines guided prompts with flexible input formats and optional feedback loops.

Reflective journaling, as supported by Boud, Keogh, and Walker (1985), provides learners with a means to consolidate understanding, make sense of challenges, and connect learning to prior experiences. In digital contexts, structured e-journals can scaffold reflection and reduce cognitive overload by breaking down complex tasks into manageable steps (Wang, 2017; Ifenthaler & Yau, 2020). Moreover, Ryan (2013) emphasizes the importance of balancing guided prompts with learner autonomy—offering both structure and space for personalized expression. This is particularly relevant in professional learning environments, where learners vary in motivation, experience, and reflective skill levels.

Synthesizing the data and the theoretical foundation, it becomes clear that BPOM employees are ready and willing to engage in deeper learning, but the current LMS design limits their capacity to do so. The findings justify a redesign of assessment support tools within LMS IDEAS—specifically, the integration of a reflective journal feature grounded in assessment-as-learning and self-regulation theory. Such a feature should enable learners to document their thought processes, set personal goals, evaluate challenges, and receive formative input from mentors or supervisors where appropriate.

This study contributes to the broader discourse on digital transformation in public sector education by providing empirical evidence for rethinking assessment design in government LMS platforms. It confirms prior assertions (Andrade, 2010; Earl, 2013) that effective learning in adulthood is not just about content delivery, but about empowering learners to take ownership of their development. Through this lens, assessment is not an endpoint—it is a learning process in itself.

CONCLUSION

This study reveals that while the current assessment system in LMS IDEAS—such as pre- and post-tests—is generally perceived as clear and relevant, it remains insufficient to fully support self-regulated learning among BPOM employees. The quantitative findings highlight a clear readiness among users to engage in more reflective and personalized learning processes. Respondents demonstrated strong planning and monitoring behaviors, yet they lacked sufficient tools for structured self-evaluation and reflection. The high demand for features such as reflective prompts, personalized feedback, and progress tracking mechanisms underscores the need for an *assessment-as-learning* approach within the LMS. Integrating a reflective journal feature can fill this critical gap by enabling employees to plan, monitor, and evaluate their own learning in relation to their professional tasks.

These results suggest that the development of a digital reflective journal—embedded within LMS IDEAS—could significantly enhance the quality of professional learning and promote greater learner autonomy in public sector education. Future system design should consider embedding structured yet flexible journaling tools that align with adult learning principles and support continuous development.

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