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PERTUBUHAN TEKNOLOGI DAN INOVASI PENDIDIKAN MALAYSIA

Strategic Program Management and Learner Satisfaction in Nonformal Equivalency Education: Evidence from an Indonesian Community Learning Center

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ABSTRACT

Indonesian community learning centers (PKBM) provide equivalency education for older youth and adults who need flexible routes outside formal schooling, yet evidence remains limited on which management functions are most closely associated with learner satisfaction. This study examined program management and satisfaction at a PKBM in Situbondo, Indonesia, using a quantitative correlational design. Thirty-four learners were selected by lottery-based simple random sampling from a population of 137, following the original Slovin calculation with a 15% error tolerance. A researcher-developed 24-item questionnaire measured six management functions and two satisfaction dimensions. Pilot testing at a comparable PKBM showed that all items exceeded the item-total validity criterion (critical r = .349), and the instrument was reliable (Cronbach's alpha = .889). Overall program management was rated positively by 88% of respondents, whereas 70% fell in the positive satisfaction categories. Program management was moderately associated with satisfaction, r (32) = .435, p = .010, r^2 = .189. Exploratory function-level correlations showed the strongest associations for mobilizing (r = .527, p = .001) and assessment (r = .453, p = .007); planning (r = .104, p = .557) and coaching (r = .306, p = .078) were not significant. The study contributes by showing that highly rated management functions are not necessarily the functions that best differentiate satisfaction. For equivalency education, learner-facing mobilization and feedback-oriented assessment emerge as particularly relevant targets for a data-informed improvement cycle.

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1. Introduction

Nonformal equivalency education provides a second chance for learners who need flexible routes to complete basic and secondary education. In Indonesia, community learning centers, commonly referred to as Pusat Kegiatan Belajar

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Masyarakat (PKBM), serve youth and adult learners whose educational trajectories are often shaped by work, family responsibilities, economic vulnerability, geographic constraints, and previous interruption from formal schooling. In this context, educational quality cannot be reduced to curriculum coverage or certification. It is also experienced through the way learning is scheduled, communicated, supported, assessed, and improved. This learner-facing dimension is particularly important in community-based adult learning, where participation must remain relevant to everyday life and where institutional arrangements can either reduce or intensify barriers to continued participation (Belete et al., 2022; UNESCO Institute for Lifelong Learning, 2022).

Program management is therefore a strategic educational issue rather than a purely administrative one. A PKBM may have qualified tutors and learning materials, yet learners can still experience dissatisfaction when schedules conflict with work, information is unclear, feedback is delayed, or program development does not respond to changing needs. Indonesian studies have shown that management models and internal quality assurance influence the quality and sustainability of community learning centers (Saepudin et al., 2022; Tohani et al., 2023). A recent systematic review further identifies leadership, accountability, collaboration, policy alignment, and digital governance as recurring dimensions of PKBM effectiveness (Dadang et al., 2026). These studies establish that management matters for institutional quality, but they do not by themselves explain how learners evaluate management as part of their day-to-day educational experience.

Learner satisfaction offers a complementary quality signal because it captures the relationship between what learners expect and what they actually experience. Expectation-disconfirmation theory proposes that satisfaction develops when perceived performance confirms or exceeds prior expectations (Oliver, 1980). Service-quality research likewise emphasizes responsiveness, reliability, assurance, empathy, and tangible support (Parasuraman et al., 1988). In education, however, learners should not be treated simply as customers. Satisfaction is pedagogically meaningful when it reflects whether learners can participate, understand expectations, receive useful feedback, experience respectful support, and connect learning with practical goals. Recent evidence from adult online education shows that service quality, perceived usefulness, and expectation confirmation are closely related to satisfaction and continuation intentions (Pan et al., 2024). In Indonesian PKBM, qualitative evidence similarly indicates that learning relevance, tutor empathy, communication clarity, time flexibility, and accessibility shape learner satisfaction (Saraswati et al., 2026).

Research in community and adult education has also emphasized participation, local relevance, and recognition of learner experience. Ariefianto and Hilmi (2019) showed that nonformal education contributes to community empowerment when learning is connected with local economic needs. Hilmi et al. (2023, 2025) demonstrated that community-based and indigenous learning patterns can strengthen participation by recognizing local knowledge and lived experience, while Hilmi et al. (2024) found that adult-learning principles can strengthen insight, creativity, and motivation in community training. Hilmi et al. (2026) further positioned local social practice as a transformative adult-learning space. Collectively, this literature suggests that effective nonformal education depends not only on formal program structures but also on management practices that recognize autonomy, experience, relevance, social interaction, and learner voice.

What remains insufficiently investigated is not only whether perceived program management is associated with learner satisfaction in Indonesian equivalency education, but also whether the six management functions relate to satisfaction in the same way. Existing PKBM studies have tended to examine management models, program effectiveness, governance, or quality assurance, while satisfaction studies have more often focused on service attributes without statistically linking them to an integrated management cycle. For example, Hardiyanti et al. (2025) found that equality-program effectiveness depended on needs alignment, tutor quality, schedule flexibility, and participant involvement, but did not test whether distinct management functions were differentially associated with learner satisfaction. The present study addresses this gap by examining both the overall association and exploratory function-level associations across planning, organizing, mobilizing, coaching, assessment, and development. It asks: (1) How do learners perceive program management and their satisfaction with the service? (2) Is overall program management significantly associated with learner satisfaction? (3) Which management functions show the strongest exploratory associations with satisfaction? and (4) What do these patterns imply for a learner-centered, data-informed quality-improvement strategy in nonformal equivalency education?

2. Literature Review

2.1. Program Management in Non-Formal Equivalency Education

Program management in nonformal education refers to the coordinated process of identifying learner needs, designing learning services, allocating resources, mobilizing tutors and learners, monitoring implementation, evaluating outcomes, and developing the program continuously. In equivalency education, these functions must balance two demands that can easily conflict: sufficient structure for accountability and certification, and sufficient flexibility to accommodate adult learners' work, family, and community responsibilities. This balance is consistent with broader analyses of community learning centers, which emphasize that their value lies in being locally embedded, accessible, and responsive while still requiring institutional capacity and professional management (Belete et al., 2022).

The six management dimensions used in this study form a connected improvement cycle rather than isolated administrative tasks. Planning aligns objectives, schedules, materials, and support mechanisms with learner profiles. Organizing arranges tutors, classes, facilities, communication channels, and procedures. Mobilizing concerns the active work of encouraging attendance, communicating expectations, and sustaining participation. Coaching covers instructional and psychosocial support. Assessment concerns evaluation of progress and the provision of feedback, while development refers to program refinement based on evaluation, learner input, and changing community needs. Saepudin et al. (2022) similarly place planning, organizing, implementation, and assessment at the core of a CLC management model for service quality. Tohani et al. (2023) add that quality assurance in CLCs depends on establishing, implementing, evaluating, and developing standards in ways that are effective and sustainable. More recently, Dadang et al. (2026) show that PKBM governance is shaped by interdependent leadership, accountability, collaboration, policy, and digital dimensions. Taken together, these studies suggest that management quality should be judged not only by whether procedures exist, but by whether the management cycle produces a coherent and responsive learner experience.

2.2. Adult Learning Perspective on Learner Satisfaction

Adult learning provides a useful interpretive framework for understanding why management may influence satisfaction in PKBM, although equivalency cohorts can include older youth as well as adults. In the present sample, participants were grouped from 16 to 44 years of age; therefore, adult-learning theory is used as a context-sensitive lens for flexible, experience-oriented community education rather than as an assumption that every participant was an adult. Knowles et al. (2020) argue that adult learners are more likely to engage when learning is relevant to life tasks, respects prior experience, supports autonomy, and permits immediate application. Merriam and Bierema (2014) similarly emphasize that adult learning is contextual and shaped by motivation, social relations, and opportunities for reflection. These principles imply that seemingly administrative decisions—such as scheduling, communication, tutor assignment, assessment, and follow-up—can become pedagogically consequential because they determine whether learners can participate with autonomy and perceive the program as useful.

From this perspective, satisfaction is not reducible to comfort or administrative convenience. It is a judgment about whether the program enables participation, clarifies expectations, acknowledges experience, provides useful support, and makes progress visible. Hilmi et al. (2024) show that adult-learning principles can strengthen participation, readiness, orientation, and motivation in community training, while Hilmi et al. (2026) underline the role of social interaction in transforming experience into new understanding. Empirical satisfaction research points in the same direction. Pan et al. (2024), working with adult learners in online education, found that service quality and expectation confirmation were important antecedents of satisfaction. In a more directly comparable Indonesian PKBM setting, Saraswati et al. (2026) found that learning relevance and tutor empathy were dominant internal factors, while communication clarity, time flexibility, and service accessibility shaped satisfaction externally. The convergence across these studies supports a mechanism in which management affects satisfaction when it is translated into relevant, responsive, and supportive learning conditions.

The expectation-performance view of satisfaction strengthens this mechanism. If learners expect flexibility, respect, clarity, accessible support, and practical benefit, satisfaction should increase when management consistently delivers

those features. Conversely, formally adequate planning may not produce high satisfaction if learners experience weak communication, limited feedback, or little evidence that their input affects program development. This distinction helps connect the management and satisfaction literatures: management supplies the organizational conditions of learning, while satisfaction captures the learner's evaluation of how successfully those conditions meet educational expectations. On this basis, the present study treats perceived program management as an institutional-level predictor and learner satisfaction as an experiential outcome, while recognizing that other personal and contextual factors may also contribute to satisfaction.

2.3. Research Hypothesis

Based on the theoretical and empirical synthesis, the study tested the following hypothesis: perceived quality of equivalency program management is positively and significantly related to learner satisfaction. The proposed relationship is not assumed to be causal. Rather, the hypothesis reflects the expectation that stronger planning, organization, mobilization, coaching, assessment, and development will be associated with more positive learner evaluations because these functions structure access, support, feedback, responsiveness, and expectation fulfilment.

3. Method

3.1. Research Design and Setting

This study used a quantitative correlational design. The design was selected because the purpose was to examine the direction and strength of the relationship between two measured variables rather than to test a causal intervention. The study was conducted at a community learning center in Situbondo Regency, Indonesia, which provides equivalency education for learners who require flexible nonformal education services.

The site was selected purposively because it actively implements an equivalency program and serves learners with varied educational and social backgrounds. The unit of analysis was the learner's perception of program management and satisfaction with the educational service.

3.2. Participants and Sampling

The population consisted of 137 learners enrolled in the equivalency program. The original fieldwork determined a sample of 34 using the finite-population formula commonly referred to as Slovin's formula, $n = N/(1 + Ne^2)$, with $N = 137$ and an error tolerance of $e = .15$, producing $n = 33.56$ and rounded to 34. The sample therefore represented 24.8% of the enrolled population. Selection was then implemented as simple random sampling through a lottery procedure: learner numbers from the sampling frame were randomized and drawn until 34 participants had been selected, giving each listed learner an equal chance of selection. Tejada and Punzalan (2012) caution that Slovin's formula has restrictive assumptions and should not be treated as a universally applicable precision rule. Accordingly, it is reported here transparently as the procedure used in the original study, while the small absolute sample is recognized as limiting generalizability.

The 34 respondents included 21 males and 13 females. The thesis tabulated 15 respondents in the 16–22-year category, nine in the 23–29-year category, seven in the 30–36-year category, and three in the 37–44-year category. Subsequent verification of the respondent records confirmed that all 34 participants were aged 18 years or older; therefore, the youngest category in this sample comprised adults aged 18–22. This profile supports interpretation of the study within an adult-learning context while also indicating substantial age diversity among participants.

3.3. Instrument and Variables

Data were collected using a researcher-developed closed questionnaire with a four-point Likert response scale ranging from strongly disagree to strongly agree. The instrument contained 24 statements: 18 items measured program management and 6 items measured learner satisfaction. The management blueprint followed Sudjana's (2004) six functions of nonformal program management: planning (items 1–3), organizing (4–6), mobilizing (7–9),

coaching (10–12), assessment (13–15), and development (16–18). The satisfaction items were developed from the perceived-performance and expectation dimensions of Kotler's satisfaction framework as presented by Alma (2021): service performance (19–21) and learner expectation (22–24). Thus, the questionnaire was not presented as an adaptation of a standardized published scale; it was constructed from a theory-based blueprint for the original study.

Before the main analysis, the questionnaire was pilot-tested with 34 learners at PKBM Tunas Bangsa Mandiri in Situbondo, a separate community learning center described in the thesis as having characteristics similar to the study site. Empirical item validity was assessed with Product Moment item-total correlations at alpha = .05. All 24 items exceeded the critical r value of .349: management-item coefficients ranged from .479 to .679 and satisfaction-item coefficients from .475 to .637. Pilot reliability for the 24-item instrument was Cronbach's alpha = .889. The source thesis did not report a formal expert-based content-validity index (CVI). The manuscript therefore reports the theoretical blueprint, pilot site, item-level validity evidence, and reliability transparently, without claiming a CVI that was not conducted or documented.

Table 1. Instrument blueprint and reliability

Construct	Indicator and item range	Conceptual source	Pilot evidence
Program management	Planning (1–3); organizing (4–6); mobilizing (7–9); coaching (10–12); assessment (13–15); development (16–18)	Sudjana (2004)	Item-total r = .479–.679; all > .349
Learner satisfaction	Service performance (19–21); learner expectation (22–24)	Kotler framework as presented in Alma (2021)	Item-total r = .475–.637; all > .349
Whole questionnaire	24 items; 4-point Likert scale	Researcher-developed theory-based blueprint	Cronbach's alpha = .889

3.4. Data Analysis

The analysis was conducted in five stages. First, descriptive statistics summarized construct-level classifications and the percentage of positive responses for each indicator. Second, Shapiro-Wilk normality and ANOVA-based linearity tests were conducted before inferential analysis. Third, Pearson Product Moment correlation tested the overall association between program management and learner satisfaction; r^2 and a 95% confidence interval for r were reported to show effect magnitude and uncertainty. Fourth, secondary Pearson correlations explored the association between each of the six management functions and overall satisfaction. Because these six function-level tests were exploratory and no multiplicity adjustment had been prespecified in the original study, exact unadjusted p values and confidence intervals are reported and interpreted cautiously; a Bonferroni threshold of approximately .008 (.05/6) is also noted as a conservative sensitivity check. Fifth, the statistical pattern was interpreted through adult-learning, satisfaction, and PKBM quality-improvement literature. Statistical significance for the primary overall test was judged at alpha = .05, and no correlational result is interpreted causally

3.5. Ethical Considerations

The study received ethical clearance/exemption from the Faculty of Education (FKIP), Universitas Jember (No. 1399/UN25.1.5/SP/2026). Field access was additionally authorized through formal research permission issued by FKIP Universitas Jember to PKBM Rumah Pintar Inddas (Letter No. 1390/UN25.5.5/PL.3/2026, dated 29 January 2026). Subsequent verification confirmed that all 34 respondents were aged 18 years or older. The analytic data were coded by respondent number, and this article reports only aggregate findings without names or other direct identifiers.

4. Results

4.1. Descriptive Analysis Of Program Management And Learner Satisfaction

The descriptive results indicate a clear difference between perceptions of management and satisfaction. At the construct level, 30 of 34 respondents (88%) fell in the positive categories for overall program management (agree or strongly agree), whereas 24 of 34 (70%) fell in the positive categories for overall learner satisfaction. At the indicator level, mobilizing and coaching received the highest positive-response percentages (85%), assessment reached 83%, planning and organizing each reached 82%, and development reached 77%. Both satisfaction dimensions—service performance and learner expectation—also reached 77%. The construct-level and indicator-level percentages are calculated differently, but together they show that favorable perceptions of management were more widespread than high satisfaction with the overall service experience.

Figure 1 visualizes the indicator-level pattern. The descriptive ranking alone should not be interpreted as evidence that the highest-rated function has the strongest relationship with satisfaction; the secondary correlation analysis below shows that level and association provide different information.

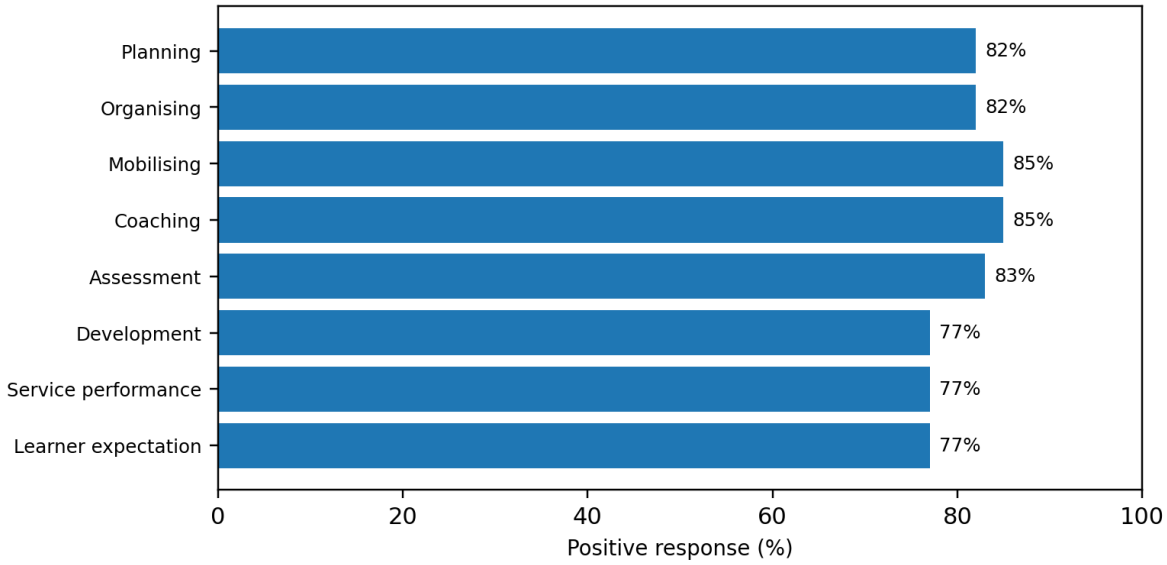

Figure 1. Positive response scores by program-management and learner-satisfaction indicators

Note. Positive response combines agree and strongly agree. The figure replaces multiple pie charts with a comparative indicator-level display to support more direct quality-improvement interpretation

Table 2. Indicator-level descriptive findings

Construct	Indicator	Positive response	Interpretation
Program management	Planning	82%	Very good
Program management	Organizing	82%	Very good
Program management	Mobilizing	85%	Very good
Program management	Coaching	85%	Very good
Program management	Assessment	83%	Very good
Program management	Development	77%	Good
Learner satisfaction	Service performance	77%	Good
Learner satisfaction	Learner expectation	77%	Good

Note. The descriptive categories are based on the percentage of positive responses reported by learners.

4.2. Assumption Testing

The normality test showed that both variables were normally distributed. The significance value for program management was .246 and the significance value for learner satisfaction was .270. Both values were above .05, indicating that the normality assumption was met.

The linearity test also supported the use of Pearson correlation. The linearity component was significant (p = .015), and the deviation from linearity was not significant (p = .433). This pattern indicates that the relationship between program management and learner satisfaction was linear and did not show a meaningful non-linear deviation

Table 3. Normality and linearity tests

Test	Variable/component	Statistic	df/N	p
Shapiro-Wilk normality	Program management	.960	34	.246
Shapiro-Wilk normality	Learner satisfaction	.962	34	.270
Linearity ANOVA	Linearity	F = 7.941	1	.015
Linearity ANOVA	Deviation from linearity	F = 1.110	19	.433

Note. p > .05 in the normality tests indicates normally distributed data. A non-significant deviation from linearity supports a linear relationship.

4.3. Correlation Analysis

Pearson correlation analysis showed a positive and significant relationship between overall program management and learner satisfaction, r(32) = .435, p = .010. The association was moderate and positive: learners who reported better management also tended to report higher satisfaction. The coefficient of determination was r^2 = .189, indicating that 18.9% of the observed variance in satisfaction was associated with overall management scores. The 95% confidence interval for r was approximately [.114, .674], which remains above zero but is relatively wide because of the modest sample.

The remaining variance reflects factors not represented in the management score and should not be attributed to management alone. Possible influences include learner motivation, work and family responsibilities, economic constraints, digital access, tutor competence, peer relations, prior schooling, and the perceived value of completing equivalency education. These factors were not measured in the present study and therefore remain hypotheses for future research rather than explanations established by the data.

Table 4. Pearson correlation between program management and learner satisfaction

Variables	r	p	N	r squared	95% CI for r
Program management and learner satisfaction	.435	.010	34	.189	.114 to .674

Note. The confidence interval was estimated using Fisher z transformation. The result indicates a statistically significant moderate positive association.

Secondary function-level correlations revealed a heterogeneous pattern that was not visible in the descriptive rankings. Mobilizing showed the strongest association with satisfaction (r = .527, p = .001), followed by assessment (r = .453, p = .007). Development (r = .374, p = .029) and organizing (r = .339, p = .050) reached the conventional unadjusted .05 threshold, whereas coaching (r = .306, p = .078) and planning (r = .104, p = .557) did not. Because six exploratory correlations were examined, these p values should not be treated as six independent confirmatory tests. Under a conservative Bonferroni threshold of approximately .008, only mobilizing and assessment remain below the adjusted threshold.

Table 5. Exploratory correlations between management functions and learner satisfaction

Function	r	P	95% CI for r	Interpretation
Planning	.104	.557	-.243 to .427	Not significant
Organizing	.339	.050	.001 to .608	Borderline; unadjusted

Mobilizing	.527	.001	.230 to .734	Strongest; robust to Bonferroni
Coaching	.306	.078	-.036 to .584	Not significant
Assessment	.453	.007	.136 to .686	Moderate; robust to Bonferroni
Development	.374	.029	.041 to .632	Positive; unadjusted

Note. Function-level correlations were secondary exploratory analyses. Confidence intervals were estimated with Fisher z transformation. Unadjusted p values are reported; Bonferroni alpha ≈ .008 for six tests.

5. Discussion

5.1. Program Management as an Adult Learning Service Strategy

The primary finding supports the hypothesis that better perceived program management is associated with higher learner satisfaction, but the moderate magnitude (r = .435) argues against a simple managerial determinism. Program management accounted for 18.9% of the observed variance, meaning that most differences in satisfaction remained outside the measured management construct. This is consistent with expectation-disconfirmation theory, in which satisfaction depends on whether actual experiences confirm expectations (Oliver, 1980), and with evidence from adult online learning showing that service quality affects satisfaction through perceived usefulness and expectation confirmation rather than as a single direct mechanism (Pan et al., 2024). In a community learning center, the comparable learner-facing mechanisms are schedules that fit daily responsibilities, understandable communication, motivational support, feedback that makes progress visible, and credible adaptation to changing needs.

The mixed-age composition of the sample also matters. Fifteen respondents were 16–22 years old, while 19 were 23–44. PKBM equivalency education therefore sits at an intersection between youth re-engagement and adult learning. The adult-learning perspective remains useful for interpreting flexibility, experience, relevance, and self-direction, but the data should not be generalized as if all respondents were mature adults. Illeris (2016) emphasizes that learning is simultaneously cognitive, emotional, and social, and Merriam and Bierema (2014) stress the importance of context. Satisfaction in this setting is consequently likely to reflect both institutional management and age-related life circumstances such as work, family support, interrupted schooling, credential goals, and confidence in returning to education.

Comparison with recent Indonesian PKBM research helps clarify the study's contribution. Saepudin et al. (2022) showed that a CLC management model organized around planning, organizing, implementation, and assessment can improve service quality and community response. Tohani et al. (2023) linked internal quality assurance to stakeholder satisfaction while emphasizing the need for comprehensive and sustainable quality processes. Hardiyanti et al. (2025) found that equivalency-program effectiveness depended on needs alignment, tutor quality, scheduling, and learner involvement, whereas Saraswati et al. (2026) identified relevance, tutor empathy, communication clarity, flexibility, and accessibility as important to PKBM satisfaction. The present study connects these strands quantitatively and adds an important refinement: the six management functions did not relate to satisfaction uniformly. This heterogeneity provides more actionable information than the overall correlation alone

5.2. Why Implementation-Facing Management Functions Are Important

The contrast between descriptive ratings and function-level correlations is the most informative result. Mobilizing and coaching were both rated positively by 85% of learners, yet only mobilizing showed a statistically clear association with satisfaction (r = .527, p = .001). Assessment, with a slightly lower positive rating of 83%, also showed a meaningful association (r = .453, p = .007). Both remained below the conservative Bonferroni threshold for six exploratory tests. These functions are highly visible during participation: mobilizing concerns encouragement, communication, and continued engagement, while assessment provides feedback about progress and achievement. Their stronger associations fit adult-learning principles of motivation, relevance, feedback, and recognition of progress (Knowles et al., 2020), and they are compatible with Saraswati et al.'s (2026) emphasis on communication and relational service quality.

Other functions showed weaker or more uncertain relationships. Development had the lowest descriptive management score (77%) and a positive but weaker correlation with satisfaction ($r = .374$, $p = .029$). Organizing was rated 82% and correlated at $r = .339$ with $p = .050$. These signals are useful for diagnosis but should be treated cautiously because they do not survive a conservative correction for multiple exploratory tests. Planning illustrates the distinction even more clearly: although 82% rated planning positively, its correlation with satisfaction was very small ($r = .104$, $p = .557$). Planning may be an upstream function that learners experience indirectly, or its relatively favorable and similar ratings may provide too little between-person variation to distinguish satisfaction. The available data cannot determine which explanation is correct.

Coaching provides a second caution against equating a high average rating with explanatory importance. Coaching was rated 85% but its association with satisfaction was $r = .306$ ($p = .078$). This differs from qualitative evidence that tutor empathy and support are often central to satisfaction (Saraswati et al., 2026). The difference is not necessarily contradictory: a factor can be widely valued and consistently present without explaining much variation between respondents, and the three-item coaching indicator in this study combines routine guidance, periodic evaluation, and perceived teacher quality. Future qualitative work should separate these components and ask which forms of support are actually salient to learners. More broadly, the results show why PKBM quality monitoring should examine both level (how positively a function is rated) and association (how strongly differences in that function correspond with satisfaction).

5.3. Contribution of The Study

The study makes three related contributions. Empirically, it provides site-specific correlational evidence that overall management and satisfaction are related in Indonesian equivalency education and, importantly, that the six management functions show different patterns. Conceptually, it distinguishes management performance from learner salience: a highly rated function is not automatically the function most closely associated with satisfaction. Mobilizing and assessment emerged as the clearest learner-facing signals, whereas planning and coaching did not significantly differentiate satisfaction despite favorable ratings. Strategically, this distinction turns learner-perception data into a diagnostic tool. Managers can identify functions that are both weakly rated and in need of development, while separately protecting functions that show stronger relationships with learner experience.

This leads to a practical diagnostic cycle rather than a one-time satisfaction survey. First, PKBM managers can collect brief periodic data on management functions and satisfaction. Second, they can distinguish 'performance gaps' (lower ratings, such as development) from 'experience-sensitive functions' (stronger associations with satisfaction, such as mobilizing and assessment). Third, managers and tutors can investigate the reasons behind these patterns through learner dialogue before selecting interventions. Fourth, changes can be documented and re-measured. This approach is consistent with quality-assurance models that treat evaluation and development as continuing functions (Tohani et al., 2023) and with governance scholarship calling for responsive, accountable, and locally adaptive PKBM management (Dadang et al., 2026). The novelty is therefore not a claim that management causes satisfaction, but a more differentiated use of management data to guide improvement.

The adult-learning perspective adds pedagogical meaning to the statistical pattern. Mobilization can support readiness, motivation, and participation; assessment can make progress visible and provide feedback for self-directed improvement; development can connect program changes with evolving work and life needs. At the same time, the mixed youth-adult cohort means that these principles should be applied flexibly rather than prescriptively. Community-based learning research also shows that participation strengthens when experience, local knowledge, and social interaction are recognized as learning resources (Hilmi et al., 2023, 2025, 2026). A learner-centered management system should therefore create opportunities for participants to influence schedules, receive actionable feedback, and contribute to program development rather than treating them only as recipients of administrative services.

5.4. Practical Implications

The practical implications follow from the combination of descriptive and correlational evidence. First, mobilizing should be protected and deliberately strengthened because it was both highly rated (85%) and most strongly associated with satisfaction ($r = .527$). Timely communication, attendance encouragement, motivational contact, and

active facilitation are therefore plausible priorities for maintaining engagement. Second, assessment deserves equal strategic attention: its 83% positive rating and r = .453 association suggest that transparent evaluation and useful feedback are not only administrative requirements but part of the learner experience. Assessment should emphasize formative feedback that explains progress, identifies gaps, and clarifies next steps.

Third, program development requires attention for a different reason: it had the lowest management rating (77%), even though its association with satisfaction was weaker and exploratory. The priority is therefore to improve visible responsiveness—periodic needs assessment, learner-feedback forums, schedule review, digital support, counselling, and short skills modules—rather than to claim that development is a proven determinant of satisfaction. Fourth, overall satisfaction should be monitored as an early-warning indicator. Only 70% of respondents fell in the positive composite satisfaction categories, although the two satisfaction dimensions each showed 77% positive responses. This gap suggests that generally favorable management does not automatically translate into uniformly high satisfaction.

Finally, planning and coaching should not be discarded simply because their correlations were non-significant. Planning remains necessary for accountability and coherent delivery, and coaching may be a broadly valued baseline condition that does not vary enough to explain satisfaction. The practical lesson is to avoid ranking management priorities from a single statistic. PKBM should triangulate descriptive scores, correlations, learner comments, attendance and completion patterns, and operational constraints. This is consistent with the broader role of community learning centers as locally embedded institutions for lifelong learning (Belete et al., 2022) and with recent findings that flexibility, accessibility, and learner involvement matter for program effectiveness and satisfaction (Hardiyanti et al., 2025; Saraswati et al., 2026).

5.5. Limitations and Future Research

This study has several limitations. The sample was small in absolute terms (n = 34), came from one community learning center, and was determined in the original fieldwork using Slovin's formula with a relatively large 15% error tolerance. Although lottery-based random selection reduced selection discretion within the site, these features limit precision and generalizability. The cross-sectional correlational design cannot establish temporal order or causality. Both constructs were measured through the same self-report questionnaire, which may introduce common-method and response-style effects. The six function-level correlations were secondary exploratory tests; four reached the conventional unadjusted .05 threshold, but only mobilizing and assessment remained below a conservative Bonferroni threshold. The source thesis also did not report a formal expert-based content-validity index, so the evidence for instrument validity is limited to the theory-based blueprint and the reported empirical item-validity testing.

Future research should use larger, multi-site samples across different PKBM accreditation levels, equivalency packages, and geographic contexts, with a priori power or precision analysis rather than relying on a generic formula. Mixed-method designs could combine function-level surveys with interviews, focus groups, or learner-journey mapping to explain why mobilizing and assessment appear more satisfaction-sensitive and why highly rated coaching did not significantly differentiate satisfaction in this sample. Longitudinal designs could test whether changes in communication, feedback, or program development precede changes in satisfaction, attendance, persistence, or completion. Future instruments should also undergo explicit expert content-validation and report reliability for each subscale. Age-stratified analyses could further examine whether management functions operate differently across younger and older adult learners.

6. Conclusion

The study found a positive and significant relationship between perceived equivalency program management and learner satisfaction at a community learning center in Situbondo, Indonesia, $r(32) = .435$, $p = .010$, with $r^2 = .189$. Descriptively, overall management was rated positively by 88% of respondents, compared with 70% for overall satisfaction. The function-level analysis added an important nuance: mobilizing ($r = .527$, $p = .001$) and assessment (r

= .453, p = .007) showed the clearest associations with satisfaction, whereas planning and coaching did not show significant associations despite receiving favorable descriptive ratings.

The findings indicate that management is a strategic component of nonformal equivalency education but should not be interpreted as a single undifferentiated determinant of satisfaction. The study's main contribution is to distinguish how well management functions are rated from how strongly they are associated with learner satisfaction. For PKBM, this supports a differentiated improvement strategy: protect learner-facing mobilization and feedback-oriented assessment, strengthen lower-rated program development, and use learner dialogue to understand why other functions show weaker relationships. Learner-perception data can thereby support continuous improvement when combined with operational and learning-outcome evidence rather than used as a stand-alone performance claim.

Declarations

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Ethical Statement
The study received ethical clearance/exemption from the Faculty of Education (FKIP), Universitas Jember (No. 1399/UN25.1.5/SP/2026). Formal permission to conduct data collection at PKBM Rumah Pintar Inddas was also issued by FKIP Universitas Jember (Letter No. 1390/UN25.5.5/PL.3/2026, dated 29 January 2026). All 34 respondents were confirmed to be 18 years of age or older. Participant data were coded by respondent number and analyzed in aggregate, and the manuscript reports no names or other direct personal identifiers.

Competing Interests
The authors declare that they have no competing interests.

Author's Contribution
Muhammad Irfan Hilmi: Supervision, methodology, validation, resources, writing - review and editing
Arsya Dwi Gustami: Conceptualization, data curation, investigation, formal analysis, writing - original draft.
Arief Tukiman Hendrawijaya: Supervision, validation, writing - review and editing.

Data availability
The anonymized questionnaire dataset can be made available by the corresponding author upon reasonable request and subject to institutional and participant privacy considerations.

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