

The Influence of the Blended Learning Method in the Orientation of Government Employees with Work Agreements (PPPK) on Improving Competency at the Regional Civil Service Agency of Sidoarjo Regency

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ABSTRACT

This study analyzes the influence of the Blended Learning method on improving the competency of Government Employees with Work Agreements (PPPK) during their orientation at the Regional Civil Service Agency (BKD) of Sidoarjo Regency. Using a quantitative correlational approach, data were collected via questionnaires from 87 respondents out of 628 Phase 1 participants of the 2025 orientation. Multiple linear regression analysis via SPSS 26 revealed that all dimensions partially and simultaneously influence competency significantly. The t-test showed significant partial effects for Live Event (sig. 0.000), Self-Paced Learning (sig. 0.005), Collaboration (sig. 0.001), Assessment (sig. 0.001), and Performance Support Materials (sig. 0.034). The simultaneous F-test yielded $F = 104.642$ (sig. 0.000). These dimensions explain 86.6% of the competency variance ($R^2 = 0.866$). Live Event emerged as the most dominant factor (22.28% effective contribution), followed by Self-Paced Learning (20.10%), Collaboration (17.18%), Assessment (15.76%), and Performance Support Materials (11.23%). Ultimately, the Blended Learning implementation empirically effectively enhances the competency of the state civil apparatus in Sidoarjo Regency.

INTRODUCTION

The bureaucratic reform continuously driven by the government cannot be separated from the quality of the human resources executing it. Within the framework of realizing the Golden Indonesia 2045 vision, the State Civil Apparatus (ASN) is required to possess high competency, integrity, and adaptability to current times and technological advancements. This is emphasized in Law Number 20 of 2023 concerning the State Civil Apparatus, which obliges every apparatus to provide professional and high-quality public services.

One of the currently officially recognized apparatus fulfillment schemes is the Government Employee with Work Agreement (PPPK). Based on Government Regulation Number 49 of 2018, PPPK employees must undergo planned and systematic competency development. Orientation serves as an initial learning process to build an understanding of core duties, ASN core values, bureaucratic ethics, and the agency's work culture. As noted by Samsara (2023), the massive recruitment of PPPK employees, primarily from former honorary staff with diverse competency backgrounds, demands an adaptive learning strategy that focuses on fulfilling competency gaps rather than generic enrichment, especially considering the limited statutory training hours allocated for them.

In 2025, Sidoarjo Regency accepted 953 PPPK employees in two phases, with the first phase comprising 628 individuals. This large number poses a distinct challenge for the Regional Civil Service Agency (BKD) in organizing an effective and efficient orientation. Conventional methods that are uniform and centralized are deemed less optimal for reaching participants with highly diverse backgrounds. Furthermore, the shift towards distance learning during and post-pandemic has exposed various technical and psychological constraints, such as digital fatigue and concentration distortion due to participants' domestic burdens, necessitating a balanced blended approach (Utama, 2024). Ratnasari, Handoko, and Widodo (2025) also highlight that successful public sector training implementation requires strict alignment between curriculum substance, digital platform design, and organizational readiness to mitigate local infrastructure constraints.

As a solution to this challenge, and aligning with the national agenda for an Electronic-Based Government System (SPBE), the BKD of Sidoarjo Regency implemented the Blended Learning method in the PPPK orientation program. Diva and Hikmawan (2023) emphasize that integrating e-learning components into corporate and public human resource management provides massive cost efficiency and accelerates competency improvement. In practice, this orientation combines a Massive Open Online Course (MOOC) that lasts for two weeks (October 14–28, 2025) with classical sessions held in five waves from November 2025 to April 2026.

According to Carman (2005), effective Blended Learning is built upon five main dimensions: (1) Live Event, synchronous face-to-face learning; (2) Self-Paced Learning, flexible independent learning; (3) Collaboration, collaborative learning activities; (4) Assessment, competency evaluation mechanisms; and (5) Performance Support Materials, the availability of supporting materials. These

five dimensions serve as the analytical framework as well as the independent variables in this study.

This study aims to analyze the extent of the influence of each of these dimensions, both partially and simultaneously, on improving the competency of PPPK orientation participants at the BKD of Sidoarjo Regency. The results of this study are expected to provide an empirical foundation for policymakers in refining apparatus competency development strategies.

THEORETICAL REVIEW

Blended Learning

Blended Learning is defined as a learning approach that combines face-to-face methods with digital technology-based learning in a planned and structured manner. Carman (2005) asserts that effective Blended Learning does not merely mix two learning formats but integrates five complementary elements: Live Event, Self-Paced Learning, Collaboration, Assessment, and Performance Support Materials.

The Live Event is a synchronous learning component that takes place directly, allowing real-time interaction between participants and instructors. Self-Paced Learning provides flexibility for participants to learn anytime and anywhere according to their own rhythm. Collaboration encourages the exchange of knowledge and experiences among participants. Assessment serves to measure competency achievement, while Performance Support Materials provide supporting learning resources that can be accessed on demand.

ASN Competency

Competency is a set of knowledge, skills, and attitudes required to execute duties and functions effectively. Sedarmayanti (2016) identifies four human resource competencies: technical, managerial, social, and intellectual/strategic. Meanwhile, Moeheriono (2014) details the dimensions of competency into Task Skill, Task Management, Contingency Management Skill, Job Role Environment Skill, and Transfer Skill.

In the context of PPPK, the National Institute of Public Administration (LAN RI) Regulation Number 15 of 2020 emphasizes that competency development aims to improve knowledge, skills, and work attitudes so that the apparatus can perform their structural duties professionally. In this study, competency is operationalized into three main indicators: knowledge, skills, and attitude.

Conceptual Framework

The conceptual framework of this study is as follows:

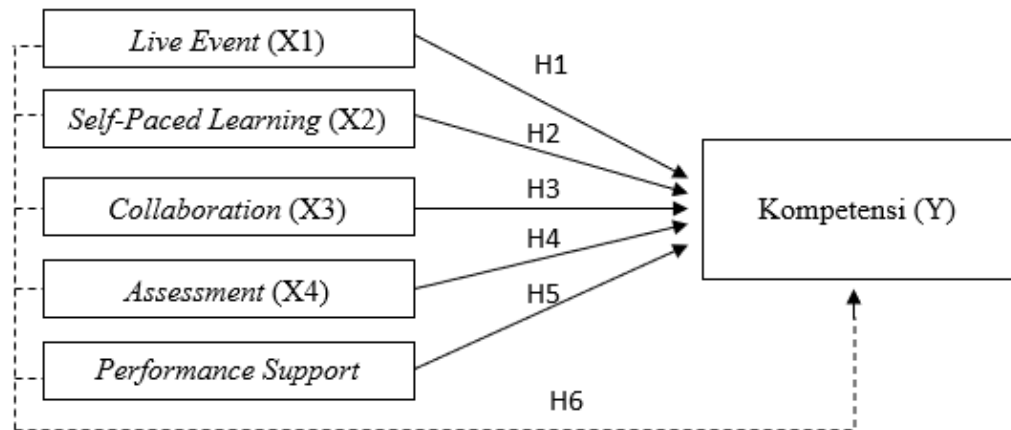


Figure 1. Conceptual Framework

Hypotheses

The hypotheses in this study are: H1: Live Event (X1) has a significant effect on Competency (Y). H2: Self-Paced Learning (X2) has a significant effect on Competency (Y). H3: Collaboration (X3) has a significant effect on Competency (Y). H4: Assessment (X4) has a significant effect on Competency (Y). H5: Performance Support Materials (X5) has a significant effect on Competency (Y). H6: X1, X2, X3, X4, and X5 simultaneously have a significant effect on Competency (Y).

METHODOLOGY

This study utilized a quantitative approach with a correlational design. The research population comprised all 628 participants of the 2025 PPPK Orientation Program (Phase 1) at the BKD of Sidoarjo Regency. Sampling was conducted using a simple random sampling technique applying Slovin's formula with a 10% margin of error, resulting in a sample of 87 respondents.

The research instrument was a structured questionnaire containing 30 statement items referring to the indicators of each variable, measured using a 1–5 Likert scale. The independent variables consisted of the five dimensions of Blended Learning (X1–X5), while the dependent variable was Participant Competency (Y). All instruments were tested for validity, requiring $r_{\text{count}} > r_{\text{table}}$ (0.210), and reliability, requiring a Cronbach's Alpha > 0.60 .

Data were analyzed using SPSS 26 through the following stages: descriptive statistics, classical assumption tests (normality and multicollinearity), multiple linear regression analysis, coefficient of determination test (R^2), partial t-test, and simultaneous F-test. In addition to questionnaire data, the study also utilized participants' academic achievement data (pre-test, MOOC, and post-test) as reinforcing data.

RESULTS

Result

Respondent Profile

Out of the 87 respondents, 55.2% were male and 44.8% were female. The majority of participants were in the 30–40 age group (43.7%). Educational backgrounds were dominated by Bachelor's Degree/D4 graduates (54%), High School (33.3%), Associate Degree/D3 (10.3%), and Postgraduate (2.3%). Based on job type, technical personnel constituted the largest group (51.7%), followed by educational personnel (41.4%) and healthcare personnel (6.9%).

Validity and Reliability Test

All indicators have an r_{count} value greater than the r_{table} critical value (0.210), confirming that all 30 indicators are valid. Furthermore, all variables yielded a Cronbach's Alpha > 0.60 (ranging from 0.759 to 0.895), declaring all instruments highly reliable.

Descriptive Statistics and Academic Progression

The average scores of the five dimensions of Blended Learning ranged from 17.07 to 17.85 out of a maximum score of 20, all of which fall into the very high category. Assessment had the highest average (17.85) with the most uniform response variation (SD = 1.944), while Performance Support Materials had the lowest average (17.07) with the highest variation (SD = 2.632). The average participant competency score was 40.93 out of a maximum of 50, falling into the high category.

Participants' academic achievement data showed a highly significant and progressive improvement at each stage of the Blended Learning implementation. The initial Pre-Test average of 68.10 (SD = 10.517) increased substantially to 85.82 (SD = 8.472) during the asynchronous MOOC stage. The mastery of knowledge peaked in the final Post-Test following the classical sessions, yielding an impressive average of 95.17 (SD = 5.522). This progressive 27.07-point jump, alongside the narrowing standard deviation, serves as strong objective evidence that the structured phases of the Blended Learning program effectively standardize and elevate the cognitive capacities of the participants.

Classical Assumption Tests

The normality test using the One-Sample Kolmogorov-Smirnov test yielded a significance value of 0.200 (> 0.05), indicating that the residual data are normally distributed. The multicollinearity test showed that all independent variables have a Tolerance value > 0.10 and VIF < 10, confirming no symptoms of multicollinearity in the regression model.

Multiple Linear Regression and Hypothesis Testing

Based on the multiple linear regression analysis, the following model equation is obtained:

$$Y = 0.743 + 0.627X_1 + 0.460X_2 + 0.428X_3 + 0.516X_4 + 0.261X_5$$

Table 1. t-Test and F-Test Results Summary

Variable	t	Sig. (t-test)	F	Sig. (F-test)	R Square
Live Event (X ₁)	3.847	.000	104.642	.000	.866
Self-Paced Learning (X ₂)	2.896	.005			
Collaboration (X ₃)	3.597	.001			
Assessment (X ₄)	3.453	.001			
Performance Support (X ₅)	2.151	.034			

The t-test significance values for all independent variables are below 0.05, concluding that H1 through H5 are accepted. The simultaneous F-test produced an $F_{\text{count}} 104.642 > F_{\text{table}} 2.33$ (sig. $0.000 < 0.05$), confirming that H₆ is accepted. The R² value of 0.866 strongly indicates that 86.6% of the competency variation can be explained by this Blended Learning model. Effective contributions were distributed as follows: Live Event (22.28%), Self-Paced Learning (20.10%), Collaboration (17.18%), Assessment (15.76%), and Performance Support Materials (11.23%).

DISCUSSION

The Effect of Live Event on Competency

Live Event provided the largest effective contribution among the five dimensions, standing at 22.28% (relative contribution 25.73%), with an average score of 17.70 (very high category). This finding aligns with Wahyuni and Al Ayyubi (2023), who concluded that the face-to-face learning component allows for direct interaction with instructors, making the understanding of the material more contextual. Expanding on this, Maninggar et al. (2023) confirm that synchronous face-to-face learning is critical in maintaining the psychological commitment and emotional attention of state apparatus participants, which is often diluted in purely online formats. Furthermore, Kalatasik (2024) asserts that the effectiveness of classical communication remains highly significant in building a foundational understanding of complex bureaucratic systems. In the context of PPPK orientation, which aims to internalize ASN values and work culture, these physical interactive sessions are irreplaceable.

The Effect of Self-Paced Learning on Competency

The Self-Paced Learning variable proved to have a significant effect with its effective contribution at 20.10%. The increase in the academic average score from the pre-test at 68.10 to 85.82 during the MOOC stage reinforces the objective effectiveness of this component. These results are in line with Samsara (2023), who found that MOOC-based learning reaches participants with diverse backgrounds effectively without disrupting their structural duties. This flexibility mitigates the risk of motivation drops and digital fatigue often found in rigid, purely distance-learning models (Utama, 2026). Junida and Marbun (2023) also found that independent learning via Learning Management Systems (LMS) lays the initial cognitive foundation for professional integrity and work loyalty before participants engage in deeper discussions.

The Effect of Collaboration on Improving Competency

The Collaboration variable had a significant effect with an effective contribution of 17.18%. Puspitarini (2022) emphasized that the availability of adequate communication spaces and facilitator responsiveness are defining pillars of collaboration. Juwita (2023) highlights that character building and professionalism are exceedingly challenging in purely online settings without active, monitored collaboration among peers and mentors. Nisa et al. (2024) further argue that effective collaboration overcomes operational constraints by aligning offline and online interactions seamlessly, bridging the diverse job background such as Technical Personnel (51.7%), Educational Personnel (41.4%), and Healthcare Personnel (6.9%) into a cohesive public service ecosystem mindset.

The Effect of Assessment on Improving Competency

Descriptively, Assessment had the highest average score (17.85) with the smallest standard deviation (1.944), indicating highly consistent participant evaluations. Musawirin, Menap, and Sismulyanto (2024) discovered that a phased evaluation system consistently produces a measurable increase in knowledge. Puspita and Tirtoni (2023) also proved through quasi-experimental designs that continuous assessment in blended models significantly elevates cognitive learning outcomes compared to traditional control groups. The drastic leap from a minimum post-test score of 50 in the pre-test to 85 in the post-test signifies that the formative and summative assessments implemented by the BKD Sidoarjo provided fair, transparent motivations for participants to excel.

The Effect of Performance Support Materials on Improving Competency

Although it contributed the smallest effective share (11.23%), Performance Support Materials remain statistically significant. The highest standard deviation (2.632) indicates varying levels of digital literacy among participants. Lestari (2022) points out that internal technical obstacles, such as local server capacity and internet bandwidth in the participants' origin regions, can severely limit target achievement if adequate performance support materials (like downloadable modules, clear platform guidelines, and responsive helpdesks) are not provided. Diva and Hikmawan (2023) conclude that on-demand accessible digital materials are crucial not only during the training but also post-training when participants face real challenges in the workplace.

The Simultaneous Effect of the Five Dimensions on Competency

The F-test proved that the five dimensions simultaneously have a massive effect on improving participant competency, yielding an R^2 of 0.866. This exceptional explanatory power confirms that the success of blended learning is highly determined by the harmonious integration of all learning components, rather than relying on a single dominant feature. This aligns with Safaruddin (2025), who found that transitioning from fully classical training to a well-integrated blended learning model not only drives massive budget efficiency but

also accelerates the digital transformation adaptation of the institution without sacrificing the quality of human resource output.

CONCLUSIONS AND RECOMMENDATIONS

The research results prove that the five dimensions of blended learning – Live Event, Self-Paced Learning, Collaboration, Assessment, and Performance Support Materials have a positive and significant effect on improving the competency of PPPK orientation participants at the BKD of Sidoarjo Regency, both partially and simultaneously.

It is recommended that the BKD of Sidoarjo Regency maintain the robust quality of Live Event sessions, enhance the accessibility of Performance Support Materials through more intuitive video-based guides to accommodate varying digital literacies, and strengthen formative feedback within the Assessment system. Future researchers are encouraged to expand the model by incorporating mediating variables (such as motivation or digital literacy) to account for the 13.4% of unexplained variation and to replicate the study across different regional agencies to solidify the nationwide policy foundations for ASN competency development.

FURTHER STUDY

Based on the recommendations provided in the study, future research should focus on expanding the current conceptual model by incorporating mediating variables such as motivation or digital literacy. Including these variables would be valuable to account for the remaining 13.4% of unexplained variation in participant competency. Furthermore, it is highly recommended that subsequent studies replicate this research across different regional agencies. Expanding the geographical and institutional scope of this study will help to solidify the nationwide policy foundations for the competency development of the State Civil Apparatus (ASN).

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