



## **Organizational Culture, Self-Efficacy, and ICT Skills as a Mediator of Educator Performance in Aviation Vocational Education**

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**Article Info:**

**Article history:**

Received: May 06, 2026

Revised: June 12, 2026

Accepted: June 15, 2026

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**Keywords:**

Educator Performance; ICT Skills;  
Organizational Culture; Self-  
Efficacy; Vocational Education

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**Abstract**

**Background:** Within the vocational education sector, educator performance serves as a fundamental determinant of graduate quality; however, it frequently encounters constraints arising from rigid institutional structures and inadequate digital proficiency.

**Objective:** This study examines the influence of organizational culture, self-efficacy, and Information and Communication Technology (ICT) skills, both directly and indirectly, on the performance of educators at the Indonesian Aviation Polytechnic (PPI) Curug.

**Methods:** A quantitative research design employing a survey method was applied to 85 respondents consisting of lecturers and instructors. Path analysis using SPSS software served as the primary data analysis technique.

**Results:** The findings indicate that (1) organizational culture has a direct positive effect on educator performance ( $\beta_{y1} = 0.024$ ); (2) self-efficacy has a direct positive effect on educator performance ( $\beta_{y2} = 0.488$ ); (3) ICT skills have a direct positive effect on educator performance ( $\beta_{y3} = 0.499$ ); (4) organizational culture has a direct positive effect on ICT skills ( $\beta_{z1} = 0.563$ ); and (5) self-efficacy has a direct positive effect on ICT skills ( $\beta_{z2} = 0.328$ ). Furthermore, ICT skills function as a mediating variable by mediating (6) the relationship between organizational culture and educator performance ( $\beta = 0.698$ ), and (7) the relationship between self-efficacy and educator performance ( $\beta = 0.639$ ).

**Conclusion:** These findings confirm that ICT skills serve as a significant mediating construct in the relationship between organizational culture and self-efficacy on educator performance. The study recommends that PPI Curug management prioritize competency-based ICT training programs and self-efficacy enhancement strategies as integrated components of human resource development policy to improve overall educator performance in the digital era of aviation vocational education.

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**To cite this article:** Hendratno, T., Suhendra, & Istiadi, Y. (2026). Organizational culture, self-efficacy, and ICT skills as a mediator of educator performance in aviation vocational education. *Glosains: Jurnal Sains Global Indonesia*, 7(3), 1118–1130. <https://doi.org/10.59784/glosins.v7i3.777>

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### **INTRODUCTION**

As a vocational higher education institution operating under the authority of the Ministry of Transportation of the Republic of Indonesia, the Indonesian Aviation Polytechnic (PPI) Curug bears a strategic mandate to develop aviation human capital characterized by professionalism, competence, and strong integrity. Within this institutional architecture, lecturers and instructors constitute the primary agents responsible for delivering high-quality instruction aimed at producing graduates who satisfy both national and international aviation industry standards in safety and service.

Under normative expectations (*das Sollen*), the professional conduct of lecturers and instructors at aviation polytechnics adheres to competency benchmarks established in Permenhub Number PM 48 of 2019 on the Organizational Structure and Work Procedures of

Aviation Polytechnics and PMK Number 47 of 2021 on Competency Standards for the Instructor Functional Position. These standards encompass mastery of aviation technical content, integration of flight simulators and learning management systems into practical training activities, strict adherence to safety standard operating procedures, competency-based assessment of cadets aligned with international certification requirements, and contributions to aviation-related research and community service that yield employment-ready graduates holding recognized competency certificates.

Within this setting, the professional conduct of educators at PPI Curug occupies a pivotal position. Performance, as conceptualized by Mangkunegara (2011), encompasses the qualitative and quantitative outcomes of an individual's work output when executing assigned responsibilities. Under optimal circumstances, lecturers and instructors would perform at consistently high levels, enabling the institution to reliably produce graduates equipped to compete in the aviation sector (Reyes-Chua & Amurao, 2024). Nevertheless, such performance outcomes do not materialize spontaneously; rather, they are shaped by a constellation of factors originating from the organizational environment, individual attributes of educators, and prevailing dynamics of the strategic landscape.

Among organizational determinants, organizational culture stands out as a particularly influential factor (Aryani & Widodo, 2020). Robbins (2019) conceptualize organizational culture as a system of collectively held values and shared meanings maintained by members of an organization, thereby distinguishing one institution from another. From a normative standpoint (*das Sollen*), PPI Curug is expected to cultivate a robust and constructive organizational culture manifested through clearly articulated values of safety, discipline, professionalism, and integrity, which in turn nurture institutional belonging, reinforce organizational commitment, and enhance educator performance. In practice (*das Sein*), however, a weak organizational culture may erode motivation, diminish institutional attachment, and ultimately impede the attainment of organizational objectives (Adinew, 2024; Matthews, 2023).

Beyond organizational determinants, the internal psychological factor of self-efficacy plays an equally critical role. Bandura (1997) defines self-efficacy as an individual's belief in his or her capacity to organize and execute the actions required to produce specific outcomes. Under favorable conditions, educators with strong self-efficacy demonstrate confidence, persistence, and adaptability when confronted with instructional challenges, enabling them to design, deliver, and assess teaching and learning activities more effectively (Martin & Mulvihill, 2019). In contrast, low self-efficacy may lead to hesitation, reduced willingness to adopt innovative pedagogical strategies, and potential declines in instructional performance quality.

The rapid advancement of information and communication technology (ICT) introduces an additional critical dimension. Ongoing digital transformation in education requires educators to integrate technological tools into instructional practices to enhance effectiveness, efficiency, and engagement among digitally oriented learners (Timotheou et al., 2023). Ideally, educators at PPI Curug should demonstrate proficiency in using learning management systems (LMS), flight simulators, and other digital instructional tools as integral components of teaching and training. However, disparities in ICT competence persist among educators, resulting in suboptimal utilization of technology to support professional performance.

The discrepancy between normative expectations and actual conditions is evidenced by preliminary survey data collected on January 29, 2026, from 30 educators (lecturers and instructors) at PPI Curug using purposive sampling. The survey instrument consisted of a structured observation checklist and a brief questionnaire covering five performance dimensions: content mastery, instructional methodology, assessment instrument preparation, teaching motivation, and engagement in professional development. All instruments were administered and collected on the same day through direct distribution. Findings indicated that while most respondents demonstrated adequate content mastery, applied diverse instructional strategies, and developed appropriate assessment tools, several performance dimensions required attention. Approximately 10% of educators reported difficulties in sustaining teaching motivation, while around 20% faced limited access to professional development opportunities such as training programs, academic seminars, and workshops, resulting in approximately 30% of educators whose performance did not fully meet institutional standards.

This proportion is not negligible, particularly in an aviation vocational education institution that demands exceptionally rigorous standards of quality and safety. Moreover, the underperforming indicators relate to foundational dimensions, including internalization of organizational values, sustained teaching motivation, adaptive competence, and effective ICT utilization, all of which are theoretically and empirically associated with instructional quality and learning outcomes. Consequently, the central challenge extends beyond subject-matter expertise to include continuous enhancement of educator competencies and sustained intrinsic motivation to improve pedagogical practice. This condition highlights a clear gap between expected standards and actual implementation.

Addressing this gap requires PPI Curug to establish a comprehensive support ecosystem capable of strengthening both motivation and professional capacity. Such a system should include fair performance recognition mechanisms, constructive feedback systems, a collegial work environment, and sustained professional development programs delivered through structured training, mentoring, and collaborative learning communities for lecturers and instructors. Within this integrated framework, strengthening organizational culture, enhancing self-efficacy, and improving ICT skills are positioned as three foundational pillars for improving educator performance.

Drawing on the foregoing analysis, organizational culture, self-efficacy, and ICT skills emerge as theoretically significant variables influencing educator performance. A review of the literature, however, reveals several gaps. First, no prior study has specifically positioned ICT skills as a mediating variable linking organizational culture and self-efficacy to educator performance within Indonesian aviation vocational education. Second, aviation polytechnics under the Ministry of Transportation operate with distinctive cultural characteristics, including strict safety orientation, hierarchical command structures, and compliance-based norms, which differ from conventional higher education institutions yet remain underexplored in educational management research. Third, existing studies on ICT skills and teacher self-efficacy have largely focused on general secondary or mainstream higher education contexts, leaving a gap in specialized vocational environments such as PPI Curug. Accordingly, this study was conducted to analyze and empirically test the direct and indirect effects of organizational culture, self-efficacy, and ICT skills as an intervening variable on educator performance at the Indonesian Aviation Polytechnic (PPI Curug). The findings are expected to contribute to theoretical development in vocational education management and provide an empirical basis for evidence-based policy to improve educator quality in aviation education institutions.

This study aims to analyze the direct and indirect influence of organizational culture, self-efficacy, and information and communication technology (ICT) skills as intervening variables on the performance of educators at the Indonesian Aviation Polytechnic (PPI) Curug, with the following details: 1) The direct influence of organizational culture on the performance of educators. 2) The direct effect of self-efficacy on the performance of educators. 3) The direct influence of information and communication technology (ICT) skills on the performance of educators. 4) The direct influence of organizational culture on the information and communication technology (ICT) skills of educators. 5) The direct effect of self-efficacy on the information and communication technology (ICT) skills of educators. 6) The indirect influence of organizational culture on the performance of educators through ICT skills as an intervening variable (mediation). 6) The indirect effect of self-efficacy on the performance of educators through ICT skills as an intervening variable (mediation).

## LITERATURE REVIEW

### *Performance of Educators*

Within the international scholarly discourse, educator performance is recognized as a multidimensional occupational construct that transcends classroom-based instructional activity alone. Broadly defined, teachers' job performance refers to the repertoire of professional behaviors that educators exhibit in relation to core instructional duties, contextual contributions to the school environment, and responsiveness to evolving occupational demands (Hanif & Pervez, 2004; Limon & Nartgün, 2020). Limon (2020) advanced the Teacher Job Performance Scale and demonstrated through factor-analytic procedures that educator performance comprises three principal dimensions: task performance, contextual performance, and adaptive

performance. Similarly, Hanif (2004), in their development and psychometric validation of the Teachers' Job Performance Scale, delineated four core components of educator performance, namely instructional skill, managerial competence, discipline and regularity, and interpersonal proficiency, collectively capturing the quality of instruction, classroom organization, behavioral standards, and teacher-student relational dynamics. Corroborating evidence from established conceptual frameworks on educator evaluation, including the works of Stronge (2018), Danielson (2013), Marzano (2007), Darling (2015), and Stronge and Tucker (2003), consistently characterize teacher performance as an integrated set of domains spanning instructional planning, pedagogical delivery, classroom governance, learner assessment, and professional accountability.

### ***Organizational Culture***

Within educational settings, organizational culture is fundamentally conceived as a constellation of foundational assumptions, values, beliefs, and norms that are collectively held and internalized by organizational members as they navigate challenges of external adaptation and internal cohesion, subsequently transmitted to incoming members as the sanctioned framework for perceiving, reasoning, and behaving within the institution (Schein, 2010). Under this conceptualization, culture extends well beyond a mere "atmosphere" or climate; it constitutes a deeply embedded system of shared meaning manifested through artifacts, espoused values, and tacit underlying assumptions that govern the everyday functioning of schools and educational organizations.

Organizational culture as a form of "collective programming of the mind" that demarcates one institution from another, implying that prevailing values such as power distance, collectivism, and long-term orientation permeate school governance practices and shape relational dynamics among leaders, educators, and students. Complementing this perspective, Kennedy (1982) articulate culture as "the way things are done around here," a characterization reflected in core institutional values, exemplary organizational figures, ceremonial practices, and informal communication channels embedded within the workplace. This analytical lens positions organizational culture as an "organizational personality" that furnishes identity, strategic direction, and behavioral benchmarks for all constituents of the educational institution.

### ***Self-Efficacy***

The construct of self-efficacy originates from the theoretical work of Bandura, who defined it as an individual's belief in his or her capacity to organize and execute the courses of action necessary to attain desired outcomes (Bandura, 1997). Applied to the educational domain, self-efficacy denotes the conviction held by educators that the instructional strategies they design and implement can meaningfully influence student learning processes and achievement outcomes (Bandura, 1997).

According to Bandura (1997), self-efficacy is shaped by four primary sources: enactive mastery experiences, vicarious learning through observational modeling, social and verbal persuasion, and the interpretation of physiological and affective states. In the teaching context, these sources may manifest as accumulated instructional successes, observation of effective peer practices, encouragement from institutional leaders and colleagues, and the capacity to regulate stress and emotional responses during teaching (Bandura, 1997). Within this theoretical architecture, self-efficacy exerts influence across cognitive, motivational, affective, and behavioral dimensions of teaching, thereby establishing itself as a critical determinant of instructional quality (Bandura, 1997).

### ***Information and Communication Technology (ICT) Skills***

In current educational scholarship, ICT skills among educators are increasingly conceptualized as a repertoire of practiced competencies demonstrated through the application of information and communication technology across the full range of professional teaching responsibilities, rather than merely a subjective sense of technological capability (Fu, 2013). through the construction of the Teachers' ICT Skills Scale (TICTS), underscored that ICT proficiency is best captured by the regularity with which educators engage in computer

operations, file management, word processing and presentation software usage, spreadsheet applications, and internet-based activities for both instructional and administrative purposes. Balanskat (2006) similarly argued that robust ICT skill assessment should foreground the frequency and habitual integration of technology within the scope of educators' professional functions, on the grounds that systematic behavioral patterns offer a more authentic reflection of skill than generalized or normatively framed self-evaluations. This perspective aligns with contemporary measurement trends that redirect analytical focus from perceived capability to observable digital practices enacted by educators in classroom and institutional contexts.

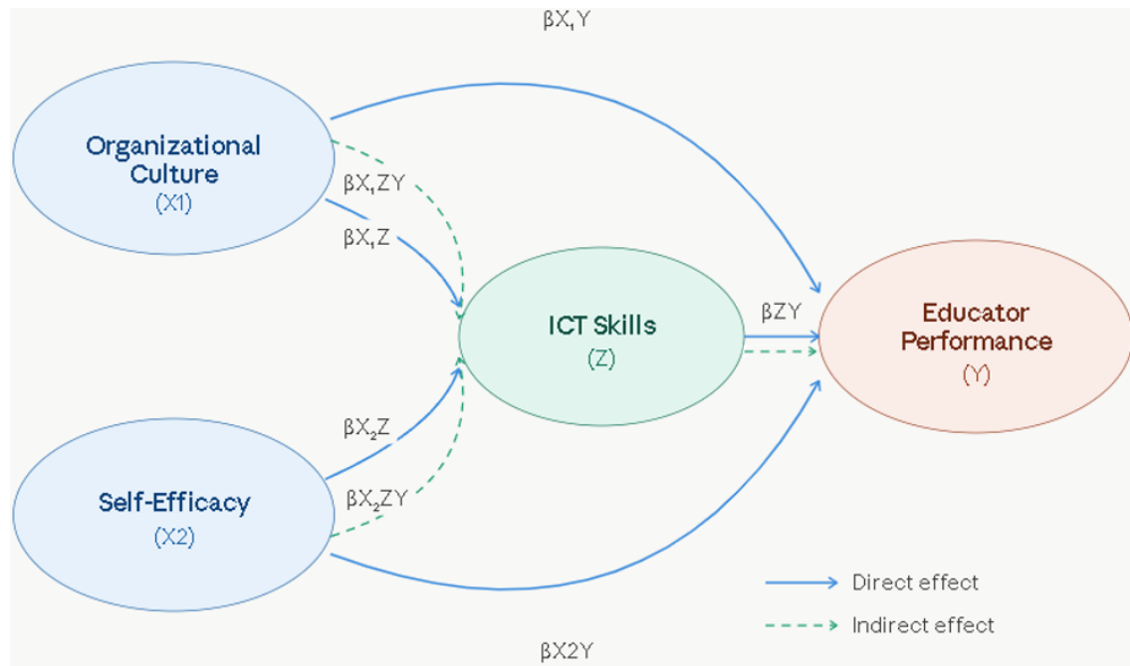
### Research Hypothesis

Grounded in the theoretical and empirical framework outlined above, the following seven research hypotheses were developed in correspondence with the research questions: 1) There is a direct influence of organizational culture on the performance of educators at the Indonesian Aviation Polytechnic Curug. 2) There is a direct influence of self-efficacy on the performance of educators at the Indonesian Curug Aviation Polytechnic. 3) There is a direct influence of information and communication technology (ICT) skills on the performance of educators at the Indonesian Aviation Polytechnic Curug. 4) There is a direct influence of organizational culture on the information and communication technology (ICT) skills of educators at the Indonesian Aviation Polytechnic Curug. 5) There is a direct influence of self-efficacy on the information and communication technology (ICT) skills of educators at the Indonesian Aviation Polytechnic Curug. 6) There is an indirect influence of organizational culture on the performance of educators through ICT skills as an intervening variable. 7) There is an indirect influence of self-efficacy on the performance of educators through ICT skills as an intervening variable.

### METHOD

This investigation adopted a quantitative research paradigm employing a causal survey design to examine the effects of Organizational Culture ( $X_1$ ) and Self-Efficacy ( $X_2$ ) on educator performance ( $Y$ ), both directly and indirectly through ICT skills ( $Z$ ) serving as an intervening variable. The study population encompassed all educators at PPI Curug, totaling 102 individuals comprising lecturers and instructors. The sample size was calculated using the Slovin formula with a 5% margin of error, yielding 85 respondents distributed as 59 lecturers and 26 instructors, selected through proportional random sampling.

Eligibility criteria for respondent selection were: (1) active employment status as a lecturer or instructor, (2) a minimum tenure of one year at PPI Curug, and (3) direct involvement in classroom teaching or hands-on practical instruction. Data were collected using a structured questionnaire with a five-point Likert scale (1 = strongly disagree to 5 = strongly agree), consisting of 40 items: 10 items measuring Organizational Culture ( $X_1$ ), 10 items assessing Self-Efficacy ( $X_2$ ), 10 items measuring ICT skills ( $Z$ ), and 10 items evaluating educator performance ( $Y$ ). Instrument validity was established through Pearson product-moment correlation analysis, with all items producing  $r$ -values exceeding the critical threshold ( $r > 0.213$  for  $n = 85$ ,  $\alpha = 0.05$ ). Internal consistency reliability was assessed using Cronbach's alpha, with all constructs exceeding the conventional acceptability benchmark ( $\alpha > 0.70$ ): Organizational Culture ( $\alpha = 0.847$ ), Self-Efficacy ( $\alpha = 0.863$ ), ICT skills ( $\alpha = 0.871$ ), and educator performance ( $\alpha = 0.859$ ). All statistical analyses were performed using SPSS version 31, with path analysis employed to assess both direct and indirect intervariable relationships and to evaluate the mediating role of ICT skills within the proposed research model.

**Figure 1.** Research Framework

Within the proposed analytical framework, Organizational Culture (X<sub>1</sub>) and Self-Efficacy (X<sub>2</sub>) function as exogenous constructs, operating exclusively as predictor variables. Conversely, ICT Skills (Z) and Educator Performance (Y) constitute endogenous constructs inasmuch as both are accounted for by other variables in the model: Z is predicted by X<sub>1</sub> and X<sub>2</sub>, whereas Y is subject to direct effects from X<sub>1</sub>, X<sub>2</sub>, and Z, as well as indirect effects channeled through Z in its capacity as an intervening variable.

## RESULTS AND DISCUSSION

### Results

#### Hypothesis Testing

Following the completion of the structural model analysis, the resulting calculations were applied to hypothesis testing to ascertain the direct and indirect effects among the study variables. Each proposed hypothesis was evaluated based on the computed path coefficient values and their corresponding significance levels. The outcomes of all hypothesis tests are presented as follows.

**Table 1. Summary of Path Analysis Hypothesis Testing Results**

| H  | Path Relationship                                         | $\beta$ Coeff. | t / z Value | t/z Table ( $\alpha=0.05$ ) | p-value | Decision                 |
|----|-----------------------------------------------------------|----------------|-------------|-----------------------------|---------|--------------------------|
| H1 | X <sub>1</sub> → Y (Org. Culture → Educator Performance)  | 0.024          | 11.380      | 1.662                       | 0.000   | H0 Rejected; H1 Accepted |
| H2 | X <sub>2</sub> → Y (Self-Efficacy → Educator Performance) | 0.488          | 16.542      | 1.662                       | 0.000   | H0 Rejected; H1 Accepted |
| H3 | Z → Y (ICT Skills → Educator Performance)                 | 0.499          | 16.933      | 1.662                       | 0.000   | H0 Rejected; H1 Accepted |
| H4 | X <sub>1</sub> → Z (Org. Culture → ICT Skills)            | 0.563          | 12.423      | 1.662                       | 0.000   | H0 Rejected; H1 Accepted |
| H5 | X <sub>2</sub> → Z (Self-Efficacy → ICT Skills)           | 0.328          | 10.052      | 1.662                       | 0.000   | H0 Rejected; H1 Accepted |
| H6 | X <sub>1</sub> → Z → Y (Mediation via ICT Skills)         | 0.698          | 10.031      | 1.960                       | 0.000   | H0 Rejected; H1 Accepted |

|           |                                                                 |       |       |       |       |                          |
|-----------|-----------------------------------------------------------------|-------|-------|-------|-------|--------------------------|
| <b>H7</b> | $X_2 \rightarrow Z \rightarrow Y$<br>(Mediation via ICT Skills) | 0.639 | 8.605 | 1.960 | 0.000 | H0 Rejected; H1 Accepted |
|-----------|-----------------------------------------------------------------|-------|-------|-------|-------|--------------------------|

### The direct influence of organizational culture on the performance of educators

The initial hypothesis was tested to examine the direct effect of organizational culture (X1) on educator performance (Y). The corresponding statistical hypothesis formulated to assess whether organizational culture (X1) exerts a direct positive influence on educator performance (Y) is stated as follows:

$$H0: \beta_{y1} = 0$$

$$H1: \beta_{y1} > 0$$

The path analysis yielded a coefficient value ( $\beta_{y1}$ ) = 0.024 with a computed t-value of 11.380. Given that the critical t-value at  $\alpha = 0.05$  is 1.662, the obtained t-statistic exceeds the threshold, thereby satisfying the criteria for rejecting H0 and accepting H1. These results demonstrate a direct positive effect of organizational culture (X1) on educator performance (Y), indicating that a more robust organizational culture is associated with improved educator performance at PPI Curug.

### The direct effect of self-efficacy on the performance of educators

The second hypothesis was examined to assess the direct effect of self-efficacy (X2) on educator performance (Y). To determine whether self-efficacy (X2) produces a direct positive effect on educator performance (Y), the following statistical hypothesis was tested:

$$H0: \beta_{y2} = 0$$

$$H1: \beta_{y2} > 0$$

The computed path coefficient ( $\beta_{y2}$ ) = 0.488 was accompanied by a t-statistic of 16.542. As the critical t-value at  $\alpha = 0.05$  equals 1.662, the calculated value surpasses this benchmark, leading to the rejection of H0 and acceptance of H1. Accordingly, self-efficacy (X2) is confirmed to exert a direct positive influence on educator performance (Y), suggesting that greater self-efficacy corresponds to enhanced performance among educators at PPI Curug.

### The direct influence of information and communication technology (ICT) skills on the performance of educators

The third hypothesis was examined to evaluate the direct effect of ICT skills (Z) on educator performance (Y). To ascertain whether ICT skills (Z) produce a direct positive influence on educator performance (Y), the following statistical hypothesis was tested:

$$H0: \beta_{y3} = 0$$

$$H1: \beta_{y3} > 0$$

The path coefficient ( $\beta_{y3}$ ) = 0.499 was obtained with a t-statistic of 16.933. Since the critical t-value at  $\alpha = 0.05$  is 1.662, the observed t-value exceeds this threshold, resulting in the rejection of H0 and acceptance of H1. This outcome establishes a direct positive effect of ICT skills (Z) on educator performance (Y), implying that stronger ICT competencies are linked to higher levels of educator performance at PPI Curug.

### The direct influence of organizational culture on the information and communication technology (ICT) skills of educators

The fourth hypothesis was tested to determine the direct effect of organizational culture (X1) on ICT skills (Z). To verify whether organizational culture (X1) exerts a direct positive influence on ICT skills (Z), the statistical hypothesis formulated is as follows:

$$H0: \beta_{z1} = 0$$

$$H1: \beta_{z1} > 0$$

The analysis produced a path coefficient ( $\beta_{z1}$ ) = 0.563 with a t-statistic of 12.423. With the critical t-value at  $\alpha = 0.05$  set at 1.662, the computed t-value clearly exceeds this criterion, warranting the rejection of H0 and acceptance of H1. This finding confirms a direct positive effect of organizational culture (X1) on ICT skills (Z), signifying that a stronger organizational culture fosters greater ICT proficiency among educators at PPI Curug.

### **The direct effect of self-efficacy on the information and communication technology (ICT) skills of educators**

The fifth hypothesis was examined to evaluate the direct effect of self-efficacy (X2) on ICT skills (Z). To assess whether self-efficacy (X2) produces a direct positive effect on ICT skills (Z), the following statistical hypothesis was formulated:

$$H_0: \beta_{z2} = 0$$

$$H_1: \beta_{z2} > 0$$

The resulting path coefficient ( $\beta_{z2}$ ) = 0.328 was associated with a t-statistic of 10.052. Given the critical t-value of 1.662 at  $\alpha = 0.05$ , the computed value exceeds this benchmark, thereby justifying the rejection of  $H_0$  and acceptance of  $H_1$ . This result substantiates a direct positive effect of self-efficacy (X2) on ICT skills (Z), indicating that heightened self-efficacy contributes to improved ICT competencies among educators at PPI Curug.

### **The indirect influence of organizational culture on the performance of educators through ICT skills as an intervening variable**

The sixth hypothesis was examined to assess the indirect effect of organizational culture (X1) on educator performance (Y) as mediated by ICT skills (Z). The statistical hypothesis formulated to test whether organizational culture (X1) produces a positive indirect influence on educator performance (Y) through the mediating role of ICT skills (Z) is stated as follows:

$$H_0: \beta_{y31} = 0$$

$$H_1: \beta_{y31} > 0$$

The computed path coefficient ( $\beta_{y31}$ ) = 0.698 was accompanied by a z-statistic of 10.031. As the critical z-value at  $\alpha = 0.05$  is 1.96, the calculated z-statistic exceeds this threshold, leading to the rejection of  $H_0$  and acceptance of  $H_1$ . This demonstrates a positive indirect influence of organizational culture (X1) on educator performance (Y) through the mediating channel of ICT skills (Z). In substantive terms, the ICT skills variable (Z) effectively transmits the influence of organizational culture (X1) onto educator performance (Y), such that a stronger organizational culture, when channeled through ICT competencies, indirectly elevates the performance of educators at PPI Curug.

### **The indirect effect of self-efficacy on the performance of educators through ICT skills as an intervening variable**

The seventh hypothesis was tested to examine the indirect effect of self-efficacy (X2) on educator performance (Y) as mediated by ICT skills (Z). To determine whether self-efficacy (X2) exerts a positive indirect influence on educator performance (Y) through the mediating function of ICT skills (Z), the following statistical hypothesis was evaluated:

$$H_0: \beta_{y32} = 0$$

$$H_1: \beta_{y32} > 0$$

The path analysis yielded a coefficient ( $\beta_{y32}$ ) = 0.639 with a z-statistic of 8.605. Since the critical z-value at  $\alpha = 0.05$  is 1.96, the observed z-statistic surpasses this benchmark, warranting the rejection of  $H_0$  and acceptance of  $H_1$ . This confirms a positive indirect effect of self-efficacy (X2) on educator performance (Y) as mediated by ICT skills (Z). The finding indicates that the ICT skills construct (Z) successfully channels the influence of self-efficacy (X2) onto educator performance (Y), meaning that stronger self-efficacy, when mediated through ICT competencies, contributes indirectly to enhanced educator performance at PPI Curug.

## **Discussion**

### **The direct influence of organizational culture on the performance of educators**

The empirical evidence demonstrates that organizational culture exerts a direct positive influence on educator performance. Hypothesis testing revealed that the path coefficient linking organizational culture to educator performance ( $\beta_{y1}$ ) is 0.024, falling within the low-magnitude category. The associated probability value of  $0.000 < 0.05$  provides grounds for rejecting  $H_0$ , confirming the statistical significance of this relationship. On this basis, the present study validates a direct, positive, and statistically significant effect of organizational culture on educator performance.

The degree of consistency in educator performance attributable to organizational culture is captured by the coefficient of determination, which stands at 0.595 or 59.5%, with the remaining 40.5% accounted for by variables external to the model. The regression equation derived from this analysis,  $\hat{Y} = 10.208 + 1.043X_1$ , serves as a predictive model for educator performance, indicating that each unit increase in the organizational culture variable is associated with a 1.043-unit increase in educator performance.

While the hierarchical and formal organizational culture operative at PPI Curug does demonstrably contribute to educator performance in a positive and statistically significant manner, the magnitude of this contribution is relatively modest compared to other predictors. From a practical standpoint, cultural improvement in isolation is unlikely to generate substantial immediate gains in educator performance unless complemented by interventions targeting other contributory variables, as evidenced by the 40.5% variance attributable to factors beyond the model.

### **The direct effect of self-efficacy on the performance of educators**

The analytical results reveal that self-efficacy produces a direct positive influence on educator performance. Hypothesis testing established that the path coefficient of self-efficacy on educator performance ( $\beta_{y2}$ ) is 0.488, classified within the moderate-strength category. With a probability value of  $0.000 < 0.05$  supporting the rejection of  $H_0$ , the significance of this coefficient is confirmed. The study therefore substantiates a direct, positive, and statistically significant relationship between self-efficacy and educator performance.

The proportion of variance in educator performance explained by self-efficacy is reflected in the coefficient of determination of 0.757 or 75.7%, leaving 24.3% attributable to other factors. The predictive regression equation,  $\hat{Y} = -22.816 + 1.286X_2$ , indicates that for each unit increase in the self-efficacy variable, educator performance increases by 1.286 units, holding other factors constant.

These findings establish self-efficacy as the predominant predictor of educator performance at PPI Curug, accounting for 75.7% of the explained variance. In practical terms, this underscores that educators' confidence in their mastery of instructional content, use of teaching tools, and classroom management competence constitutes a critical asset for meeting performance benchmarks.

### **The direct influence of information and communication technology (ICT) skills on the performance of educators**

The analysis confirms that ICT skills exert a positive direct influence on educator performance. Hypothesis testing yielded a path coefficient for ICT skills on educator performance ( $\beta_{y3}$ ) of 0.499, categorized at the moderate level. The probability value of  $0.000 < 0.05$  supports the rejection of  $H_0$ , thereby establishing the statistical significance of this coefficient. The study thus validates that ICT skills have a direct, positive, and significant bearing on educator performance.

The explanatory power of ICT skills for educator performance is captured by a coefficient of determination of 0.765 or 76.5%, with the remaining 23.5% ascribed to variables outside the current model. The resulting regression equation,  $\hat{Y} = 6,784 + 0.994Z$ , functions as a predictive tool indicating that each unit of improvement in the ICT skills variable corresponds to a 6,784-unit increase in the educator performance variable.

The empirical evidence from this study establishes ICT skills as the single most influential performance determinant at PPI Curug, a finding congruent with the institution's identity as a technology-intensive aviation vocational establishment. From a practical perspective, elevating the ICT proficiency of educators yields benefits that extend beyond administrative streamlining to directly optimize the quality of knowledge transfer and technical skill development within simulator facilities and training laboratories. This finding furnishes a compelling rationale for PPI Curug leadership to prioritize investment in expanding the digital capacity of educators as the foremost strategic response to the demands of vocational education in the contemporary digital era.

### **The direct influence of organizational culture on the information and communication technology (ICT) skills of educators**

The findings demonstrate that organizational culture has a direct positive effect on ICT skills. Hypothesis testing indicated that the path coefficient linking organizational culture to ICT skills ( $\beta_{Z1}$ ) is 0.563, which falls within the strong category. A probability value of  $0.000 < 0.05$  supports the rejection of  $H_0$ , confirming the statistical significance of this relationship. The study therefore validates a direct, positive, and significant influence of organizational culture on ICT skills.

The degree to which ICT skills are explained by organizational culture is reflected in the coefficient of determination of 0.637 or 63.7%, with the remaining 36.3% attributable to other variables. The regression equation derived,  $\hat{Z} = 16,132 + 0.949X_1$ , provides a predictive model wherein each unit of improvement in organizational culture is associated with a 16,132-unit increase in ICT skills.

These results confirm that organizational culture exercises a strong and statistically significant effect on the ICT proficiency of educators at PPI Curug. In applied terms, the findings indicate that institutional values grounded in professionalism and aligned with global aviation standards serve as principal catalysts motivating educators to continuously advance their digital competencies. This evidence demonstrates that a workplace culture supportive of collaboration, knowledge exchange, and innovation constitutes a key enabler for successful technology integration in aviation vocational education. Consequently, strategies aimed at strengthening ICT skills at PPI Curug cannot rely solely on technical training programs; they must be accompanied by the cultivation of an organizational culture receptive to technological change.

### **The direct effect of self-efficacy on the information and communication technology (ICT) skills of educators**

The analysis reveals that self-efficacy produces a direct positive influence on ICT skills. The hypothesis test established that the path coefficient of self-efficacy on ICT skills ( $\beta_{Z2}$ ) is 0.328, categorized at the moderate level. Given the probability value of  $0.000 < 0.05$ ,  $H_0$  is rejected, thereby confirming the significance of this coefficient. The study thus validates a direct, positive, and significant link between self-efficacy and ICT skills.

The proportion of variance in ICT skills explained by self-efficacy is captured by the coefficient of determination of 0.535 or 53.5%, with the remaining 46.5% attributable to factors beyond the model. The regression equation,  $\hat{Z} = 14,264 + 0.951X_2$ , indicates that each unit of enhancement in self-efficacy is associated with a 14,264-unit improvement in ICT skills.

The present findings reveal that self-efficacy constitutes a significant predictor of ICT skills among educators at PPI Curug. From a practical standpoint, the results affirm that self-efficacy serves as a primary psychological antecedent of instructional technology adoption. Educators characterized by elevated self-efficacy exhibit greater resilience when navigating technical difficulties associated with the operation of sophisticated digital systems, including flight simulator platforms and Learning Management Systems (LMS). These insights suggest that human resource development interventions at PPI Curug should extend beyond the enhancement of technical hard skills to incorporate deliberate strategies for bolstering self-efficacy through motivational support and a workplace culture that encourages technological exploration.

### **The indirect influence of organizational culture on the performance of educators through ICT skills as an intervening variable (mediation)**

The evidence indicates that organizational culture exerts a positive indirect influence on educator performance through the mediating role of ICT skills. Hypothesis testing revealed that the mediated path coefficient linking organizational culture to educator performance via ICT skills ( $\beta_{y31}$ ) is 0.698, classified within the strong category. The probability value of  $0.000 < 0.05$  warrants the rejection of  $H_0$ , confirming the significance of this mediated pathway. The study therefore validates a positive and significant indirect effect of organizational culture on educator performance as channeled through ICT skills, establishing that the ICT skills variable effectively mediates the relationship between organizational culture and educator performance.

This finding demonstrates that ICT skills meaningfully mediate the pathway through

which organizational culture influences educator performance at PPI Curug. In practical terms, the evidence confirms that a supportive organizational culture, characterized by values of professionalism and safety orientation, translates into improved educator performance when accompanied by the strengthening of digital competencies. ICT skills operate as operational conduits that convert institutional cultural values into productive professional behaviors within laboratories and simulator training environments. An effective human resource development policy for PPI Curug must therefore integrate the reinforcement of a digitally innovative work culture with ongoing programs designed to enhance ICT competency.

### **The indirect effect of self-efficacy on the performance of educators through ICT skills as an intervening variable (mediation)**

The analytical results demonstrate that self-efficacy has a positive indirect influence on educator performance through the mediating function of ICT skills. Hypothesis testing revealed that the mediated path coefficient from self-efficacy to educator performance via ICT skills ( $\beta_{32}$ ) is 0.639, classified within the strong category. The probability value of  $0.000 < 0.05$  leads to the rejection of  $H_0$ , confirming the statistical significance of this indirect pathway. The study thereby substantiates a positive and significant indirect effect of self-efficacy on educator performance as mediated by ICT skills, establishing that the ICT skills construct effectively channels the influence of self-efficacy onto educator performance.

The present investigation confirms that ICT skills serve as a significant mediating mechanism through which self-efficacy influences educator performance at PPI Curug. These findings offer a valuable psychological perspective: the confidence that instructors hold regarding their mastery of content and technology functions as a primary catalyst for enhancing digital competence. Educators possessing elevated self-efficacy tend to display heightened initiative in exploring technology-driven instructional resources, which subsequently produces observable gains in their professional performance. Accordingly, building the professional confidence of educators should constitute a central priority within human resource management policy at PPI Curug, ensuring that the institutional adoption of digital technology in aviation education proceeds with greater effectiveness and long-term sustainability.

### **Research Limitations**

Every effort has been made to adhere to the rigors of quantitative research methodology throughout this study. Nonetheless, the researcher acknowledges several inherent limitations that should inform the interpretation of the findings:

#### *Potential Bias in Questionnaire Instruments*

Primary data were obtained through self-report questionnaire instruments. Despite the completion of validity and reliability testing, the results remain contingent upon the subjective perceptions and candor of respondents. The researcher could not fully ensure that all responses accurately reflected objective conditions, given the potential for social desirability bias or respondent fatigue during instrument completion.

#### *Limitations of Variable Models*

The analytical model in this study centers on three predictor variables: Organizational Culture, Self-Efficacy, and ICT Skills. The coefficients of determination indicate that a non-trivial proportion of performance variance (ranging from approximately 23.5% to 46.5%) is attributable to factors not incorporated in the model, potentially including compensation structures, the physical work environment, or additional forms of intrinsic motivation that lie beyond the scope of the present analysis.

#### *Institutional Context Specification*

This investigation was conducted solely within the Indonesian Aviation Polytechnic (PPI) Curug, an institution with the distinctive characteristics of an official state agency. As such, the findings are context-specific and would require careful adaptation before being applied or generalized to other higher education institutions operating under different cultural frameworks and organizational architectures.

#### *Cross-Sectional Nature of Research*

All data for this study were gathered at a single point in time, yielding a cross-sectional dataset. Given that organizations such as PPI Curug are inherently dynamic and susceptible to

shifts in management policies and curricular frameworks, the findings represent organizational conditions during the specific period of data collection and may not hold under altered policy environments should analogous research be replicated in the future.

### CONCLUSION

Enhancement of educator performance can be pursued through the concurrent reinforcement of organizational culture, self-efficacy, and ICT skills as mutually reinforcing determinants. The path analysis demonstrated that organizational culture (X1), self-efficacy (X2), and ICT skills (Z) each exert a direct positive effect on educator performance (Y), with respective path coefficients of 0.024, 0.488, and 0.499. Additionally, both organizational culture and self-efficacy were confirmed to have direct positive effects on ICT skills, with coefficients of 0.563 and 0.328, respectively. Critically, ICT skills function as a mediating variable that strengthens the indirect influence of organizational culture and self-efficacy on educator performance, as reflected in mediated path coefficients of 0.698 and 0.639. These findings collectively affirm that improving educator performance cannot rely exclusively on individual internal attributes such as self-efficacy; it also depends on a supportive organizational environment and sufficient technological competence, which together serve as a strategic bridge for enhancing overall professional performance quality.

### ACKNOWLEDGEMENT

The authors extend their sincere appreciation to the leadership of the Indonesian Aviation Polytechnic (PPI) Curug for granting institutional access and providing sustained support throughout the course of this research. Gratitude is likewise expressed to all lecturers and instructors who contributed as study respondents, as well as to colleagues whose constructive critiques substantially enhanced the quality of this manuscript. This research was carried out independently and received no external funding.

### AUTHOR CONTRIBUTION STATEMENT

The first author assumed primary responsibility for conceptualization, data collection, and preparation of the initial manuscript draft, while the corresponding author contributed supervisory oversight, methodological guidance, validation procedures, and manuscript revision. All authors participated in the interpretation of findings, critically reviewed the manuscript, endorsed the final version, and accept full accountability for the accuracy and integrity of the reported work.

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