



TECHNICAL GUIDANCE AND LEADERSHIP COMPETENCE OF MERAH PUTIH COOPERATIVE CHAIRPERSONS

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Abstract:

The establishment of Merah Putih Village/Sub-district Cooperatives requires chairpersons who can make sound decisions, communicate effectively, and foster collaboration among members. This study examines the effects of material quality, instructor competence, learning methods, and post-training mentoring on the leadership competence of Merah Putih Cooperative chairpersons in South Lampung Regency. A quantitative explanatory design was employed using a census of all 95 eligible cooperative chairpersons. Data were collected through a validated and reliable five-point Likert-scale questionnaire and analyzed using multiple linear regression after testing normality, multicollinearity, and heteroscedasticity assumptions. All four independent variables had positive and statistically significant partial effects on leadership competence. The overall model was significant ($F = 16.057$, $p < 0.001$) and explained 41.6% of the variance in leadership competence ($R^2 = 0.416$). Material quality was the strongest predictor ($\beta = 0.395$), followed by learning methods ($\beta = 0.365$), post-training mentoring ($\beta = 0.285$), and instructor competence ($\beta = 0.272$). The findings indicate that relevant content, experiential learning, competent instructors, and structured follow-up support should be integrated into technical guidance programs for cooperative leaders.

Keywords: cooperatives; leadership competence; material quality; technical guidance; training transfer

INTRODUCTION

Human resource development is a foundation for professional and sustainable cooperative governance. Cooperative chairpersons play a strategic role in translating members' interests into planning, decision-making, resource management, organizational communication, and partnerships. These competencies do not arise solely from appointment to office; they require systematic investment in learning. Human Capital Theory views education and training as investments that increase knowledge, skills, productivity, and an individual's capacity to create organizational value (Becker, 1964). In the cooperative context, technical guidance is a government instrument for strengthening the managerial and leadership capacity of cooperative boards.

The need for competency development has become increasingly important under the agenda for establishing Merah Putih Village/Sub-district Cooperatives. Presidential Instruction of the Republic of Indonesia No. 9 of 2025 positions the accelerated establishment of village/sub-district cooperatives as a strategic agenda for strengthening community-based economic development. Institutional acceleration must be accompanied by the readiness of cooperative leaders because cooperatives are fundamentally managed through member participation, economic democracy, and shared responsibility under the general framework of Law of the Republic of Indonesia No. 25 of 1992. Legal incorporation alone does not automatically produce a healthy organization when the chairperson lacks



the ability to make decisions, communicate organizational direction, and build collaboration.

South Lampung Regency followed up the program by conducting technical guidance for Merah Putih Cooperative chairpersons. Baseline data from the South Lampung Regency Office of Cooperatives and SMEs in 2025 showed that pre-training leadership competence averaged 69%, comprising decision-making at 69%, organizational communication at 68%, and teamwork-building ability at 69%. Participants were also heterogeneous in age, educational background, organizational experience, and understanding of cooperative management. These conditions require a training design that goes beyond regulatory delivery by addressing operational problems, using accessible and participatory methods, and providing support for application after training. Figure 1 visualizes the baseline competence profile that motivated the intervention.

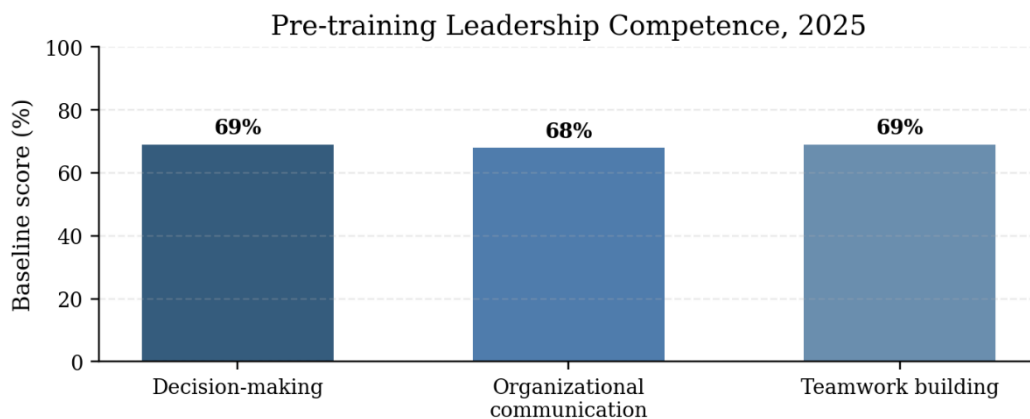


Figure 1. Baseline Leadership Competence Before Technical Guidance

Source: South Lampung Regency Office of Cooperatives and SMEs (2025).

Transfer of Training Theory explains that training benefits depend on participants' ability to retain and apply learning outcomes in the workplace (Baldwin & Ford, 1988). Successful transfer is influenced by participant characteristics, training design, and the work environment. Meta-analytic evidence indicates that training transfer depends not only on individual motivation but also on instructional design and organizational support (Blume et al., 2010). Grossman and Salas (2011) further identify content relevance, practice opportunities, feedback, and post-training support as major levers of behavioral change. This perspective positions the quality of technical guidance as an integrated process rather than a one-time event that ends when classroom instruction is completed.

Material quality determines whether the knowledge provided is relevant to job demands, current, comprehensive, systematic, and applicable. Training content developed from workplace needs helps participants build understanding that can be transferred to real situations (Noe, 2020). Instructor competence complements material quality through subject mastery, communication skills, facilitation of discussion, and feedback. Burke and Hutchins (2007) explain that facilitator quality and training design influence participants' readiness to apply learning outcomes. The learning process should also provide opportunities for concrete experience, reflection, conceptualization, and active experimentation, as proposed in Experiential Learning Theory (Kolb, 1984).

Post-training mentoring sustains competency transfer when participants encounter operational constraints. Consultation, monitoring, action-plan evaluation, and feedback can reduce the decline in competency use after training. Training evaluation linked to workplace transfer provides more meaningful information than participant satisfaction alone (Saks & Burke, 2012). In leadership training, motivation and environmental support

also influence the successful application of learning outcomes (Tafvelin & Stenling, 2021). The four components are therefore positioned as theoretically complementary predictors.

Previous studies generally demonstrate positive relationships between education and training and either competence or performance. Suwanto (2012) identified a positive relationship between leadership education and training and public-service competence. Indriani (2022) reported that technical guidance improved the knowledge of cooperative boards, while Najib et al. (2023) found that training transfer affected performance. Putra (2025) also confirmed the contribution of education and training to human-resource quality and cooperative-board performance. Although relevant, these studies tend to treat training as a general construct and have not tested the separate contributions of technical-guidance components to leadership competence in the newly established Merah Putih Cooperative context.

The research gap concerns the absence of empirical evidence regarding which technical-guidance component most strongly influences the leadership competence of cooperative chairpersons in a newly established institutional setting. The novelty of this study lies in an empirical model that disaggregates technical guidance into material quality, instructor competence, learning methods, and post-training mentoring, and then tests their partial and simultaneous effects on leadership competence. Leadership competence is measured through decision-making, communication, and team-building abilities that are directly relevant to the duties of cooperative chairpersons (Yukl, 2013).

This study aims to analyze the partial and simultaneous effects of material quality, instructor competence, learning methods, and post-training mentoring on the leadership competence of Merah Putih Cooperative chairpersons in South Lampung Regency. The results are expected to strengthen the application of Human Capital Theory and Transfer of Training Theory in cooperative leadership development and to provide an evidence base for local government in designing more focused technical-guidance programs.

RESEARCH METHOD

This study employed a quantitative approach with an explanatory design to test the effects of four independent variables on one dependent variable. The research was conducted in South Lampung Regency from May to July 2026. The unit of analysis comprised Merah Putih Cooperative chairpersons who had attended technical guidance organized by the South Lampung Regency Office of Cooperatives and SMEs in October 2025. The target population consisted of 95 chairpersons whose cooperatives had commenced operations and conducted an Annual Members' Meeting. All members of the population were included through total sampling; therefore, the final sample consisted of 95 respondents.

Primary data were collected through an online five-point Likert-scale questionnaire ranging from strongly disagree to strongly agree. Material quality was measured through relevance, completeness, currency, and ease of understanding. Instructor competence covered subject mastery, communication, facilitation, and feedback. Learning methods included participation, case discussion, practice or simulation, and interactivity. Post-training mentoring was measured through consultation, monitoring, follow-up evaluation, and continuous support. Leadership competence was measured using 12 items representing decision-making, communication, and team building. Matrix 1 summarizes the operational structure of the variables.

Matrix 1. Operationalization of Research Variables

Variable	Code	Role	Measurement indicators	Instrument note
Material quality	X1	Independent	Relevance; completeness; currency; ease of understanding	Four stated indicators; five-point Likert scale
Instructor competence	X2	Independent	Subject mastery; communication; facilitation; feedback	Four stated indicators; five-point Likert scale
Learning methods	X3	Independent	Participation; case discussion; practice/simulation; interactivity	Four stated indicators; five-point Likert scale
Post-training mentoring	X4	Independent	Consultation; monitoring; follow-up evaluation; continuous support	Four stated indicators; five-point Likert scale
Leadership competence	Y	Dependent	Decision-making; communication; team building	12 items; five-point Likert scale

Source: Constructed from the measurement description in this study.

The instrument was pilot-tested with 30 respondents outside the main sample. All items met Pearson Product-Moment validity requirements because their correlation coefficients exceeded the critical r value of 0.361. The correlation ranges were 0.764–0.847 for material quality, 0.686–0.852 for instructor competence, 0.768–0.865 for learning methods, 0.750–0.800 for post-training mentoring, and 0.690–0.847 for leadership competence. Cronbach's alpha coefficients were 0.823, 0.791, 0.832, 0.787, and 0.939, respectively; thus, all instruments were considered reliable.

Data were analyzed using descriptive statistics and multiple linear regression. Model assumptions were examined through the Kolmogorov–Smirnov residual normality test, multicollinearity assessment using tolerance and variance inflation factor values, and the Glejser heteroscedasticity test. Partial hypotheses were tested using t tests, while the simultaneous effect was tested using the F test at a 5% significance level. Model contribution was assessed using the coefficient of determination (R^2). The regression model was specified as $Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e$, where Y denotes leadership competence, X_1 material quality, X_2 instructor competence, X_3 learning methods, and X_4 post-training mentoring.

FINDINGS AND DISCUSSION

Respondent Characteristics

The respondent profile was dominated by men, with 89 respondents (93.7%), while women accounted for 6 respondents (6.3%). The largest age group was 41–50 years, comprising 30 respondents (31.6%), followed by 31–40 years with 26 respondents (27.3%) and 51–60 years with 24 respondents (25.3%). Educational attainment was dominated by senior high school graduates, with 51 respondents (53.7%), followed by bachelor's degree holders, with 39 respondents (41.1%). This profile indicates a relatively mature participant group with diverse formal education, highlighting the need for training materials and

methods that are accessible while remaining directly relevant to practical leadership tasks.

Table 1. Characteristics of Respondents

Characteristic	Category	n	%
Gender	Male	89	93.7
	Female	6	6.3
Age	20–30 years	15	15.8
	31–40 years	26	27.3
	41–50 years	30	31.6
	51–60 years	24	25.3
Education	Junior high school	3	3.1
	Senior high school	51	53.7
	Bachelor's degree	39	41.1
	Master's degree	2	2.1

Source: Survey data processed by the author (2026).

Descriptive Statistics of the Variables

The descriptive statistics show variation in respondents' assessments across all variables. Post-training mentoring had the highest mean among the independent variables (12.97), while material quality had a mean of 11.77. Leadership competence had a mean of 36.59 and a standard deviation of 9.754. These distributions provide sufficient variation for testing relationships among variables through multiple regression.

Table 2. Descriptive Statistics of Research Variables

Variable	Min.	Max.	Mean	Std. Dev.
Material quality	4	19	11.77	3.462
Instructor competence	5	19	12.42	3.164
Learning methods	5	19	12.44	3.185
Post-training mentoring	7	20	12.97	3.391
Leadership competence	13	56	36.59	9.754

Source: Survey data processed by the author (2026).

Classical Assumption Tests

The regression residuals were normally distributed because the Kolmogorov–Smirnov significance value was 0.200, exceeding 0.05. All variables had tolerance values of 0.952–0.996 and VIF values of 1.004–1.051, indicating the absence of multicollinearity. The Glejser test produced significance values of 0.259–0.932, indicating no heteroscedasticity. The model therefore met the assumptions required for multiple linear regression.

Table 3. Classical Assumption Test Results

Test	Variable	Statistic	Decision
Normality	Unstandardized residual	Asymp. Sig. = 0.200	Normal
Multicollinearity	Material quality	Tolerance = 0.952; VIF = 1.051	No multicollinearity

Test	Variable	Statistic	Decision
	Instructor competence	Tolerance = 0.996; VIF = 1.004	No multicollinearity
	Learning methods	Tolerance = 0.977; VIF = 1.024	No multicollinearity
	Post-training mentoring	Tolerance = 0.978; VIF = 1.023	No multicollinearity
Heteroscedasticity	Material quality	Sig. = 0.586	Not detected
	Instructor competence	Sig. = 0.932	Not detected
	Learning methods	Sig. = 0.736	Not detected
	Post-training mentoring	Sig. = 0.259	Not detected

Source: Regression diagnostics processed by the author (2026).

Regression Analysis and Hypothesis Testing

The regression analysis produced the equation $Y = -11.452 + 1.112X_1 + 0.840X_2 + 1.116X_3 + 0.820X_4$. All independent-variable coefficients were positive. An increase in each technical-guidance component, holding the other variables constant, was associated with an increase in leadership competence. The constant was not statistically significant at the 5% level; however, this does not alter the interpretation of the predictor coefficients, which are the focus of the study.

Table 4. Multiple Linear Regression and Partial Hypothesis Tests

Predictor	B	Std. Error	Beta	t	Sig.
Constant	-11.452	6.143	-	-1.864	0.066
Material quality	1.112	0.233	0.395	4.782	< 0.001
Instructor competence	0.840	0.249	0.272	3.375	0.001
Learning methods	1.116	0.250	0.365	4.474	< 0.001
Post-training mentoring	0.820	0.234	0.285	3.501	< 0.001

Source: Multiple regression output processed by the author (2026).

Figure 2 compares the standardized coefficients and shows that material quality had the largest relative effect, followed by learning methods, post-training mentoring, and instructor competence.

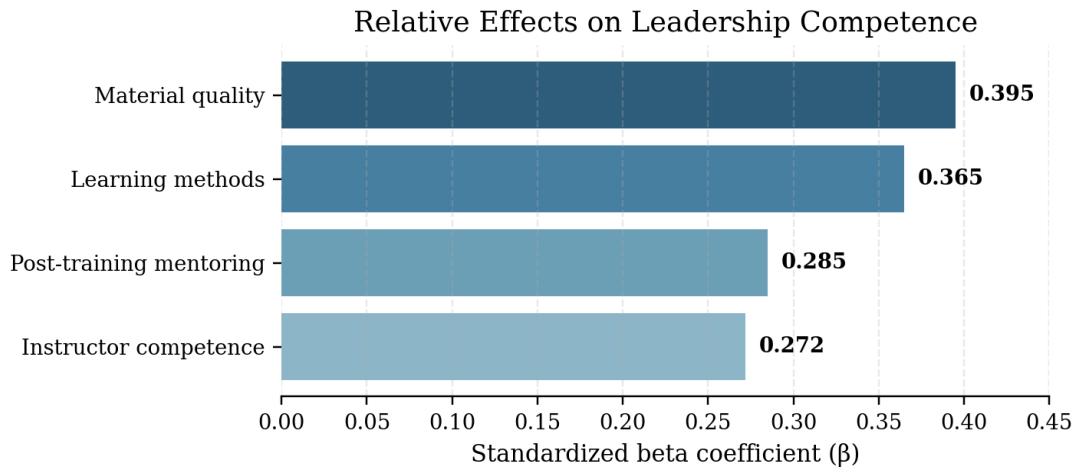


Figure 2. Standardized Effects of Technical-Guidance Components on Leadership Competence

Source: Standardized regression coefficients from Table 4.

The simultaneous test yielded $F = 16.057$ with $p < 0.001$, indicating that material quality, instructor competence, learning methods, and post-training mentoring jointly had a significant effect on leadership competence. The R value of 0.645 indicates a moderately strong model relationship. $R^2 = 0.416$ means that the four predictors explained 41.6% of the variation in leadership competence, while 58.4% was associated with factors outside the model. The adjusted R^2 of 0.391 indicates the model's explanatory capacity after accounting for the number of predictors and sample size.

Table 5. Model Summary and Simultaneous Test

Statistic	Value
R	0.645
R Square	0.416
Adjusted R Square	0.391
Std. Error of Estimate	7.615
F (df = 4; 90)	16.057
Significance	< 0.001

Source: Multiple regression output processed by the author (2026).

Variance in Leadership Competence

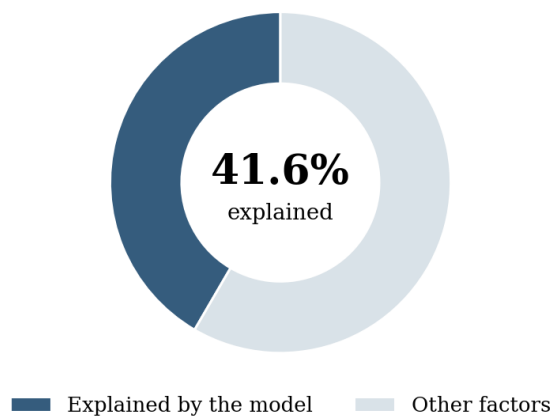


Figure 3. Variance in Leadership Competence Explained by the Model

Source: Coefficient of determination ($R^2 = 0.416$) from Table 5.

Matrix 2. Hypothesis Testing Evidence

Hypothesis	Relationship	Key statistic	p-value	Direction	Decision
H1	Material quality → leadership competence	$\beta = 0.395$; $t = 4.782$	< 0.001	Positive	Supported
H2	Instructor competence → leadership competence	$\beta = 0.272$; $t = 3.375$	0.001	Positive	Supported
H3	Learning methods → leadership competence	$\beta = 0.365$; $t = 4.474$	< 0.001	Positive	Supported
H4	Post-training mentoring → leadership competence	$\beta = 0.285$; $t = 3.501$	< 0.001	Positive	Supported
H5	X1, X2, X3, and X4 jointly → leadership competence	$F = 16.057$; $R^2 = 0.416$	< 0.001	Positive joint effect	Supported

Source: Synthesized from Tables 4 and 5.

Effect of Material Quality on Leadership Competence

Material quality was the most dominant predictor, with a standardized beta of 0.395, $t = 4.782$, and $p < 0.001$. Relevant, comprehensive, current, and understandable content provides a cognitive framework that helps cooperative chairpersons identify problems, evaluate alternatives, communicate decisions, and coordinate members. This finding is consistent with Transfer of Training Theory, which places training design among the principal conditions for learning transfer (Baldwin & Ford, 1988; Grossman & Salas, 2011). The predominance of senior high school graduates (53.7%) reinforces the importance of systematic, contextual, and practical content. High-quality material also represents a better-targeted human-capital investment because stronger instructional inputs increase the likelihood that productive competencies will develop (Becker, 1964; Noe, 2020).

Effect of Instructor Competence on Leadership Competence

Instructor competence had a positive and significant effect, with $\beta = 0.272$, $t = 3.375$, and $p = 0.001$. Subject mastery, clear communication, effective discussion facilitation, and solution-oriented feedback help participants connect concepts with cooperative problems. This result supports Burke and Hutchins (2007), who emphasize the facilitator's role in readiness for transfer. Its comparatively smaller beta does not imply that instructor competence is unimportant; rather, it suggests that instructor performance works in conjunction with relevant material and learning methods that provide opportunities for practice. Instructors should therefore be selected on the basis of regulatory expertise, practical cooperative experience, and adult-learning facilitation skills.

Effect of Learning Methods on Leadership Competence

Learning methods were the second-strongest predictor, with $\beta = 0.365$, $t = 4.474$, and $p < 0.001$. Case discussions, simulations, practice, and interaction allow participants to test knowledge in situations resembling leadership tasks. This finding validates Experiential

Learning Theory, which positions concrete experience, reflection, conceptualization, and active experimentation as an effective learning cycle (Kolb, 1984). Participatory methods help participants develop decision-making, communication, and team-building skills rather than merely memorizing material. The result extends Putra's (2025) findings by demonstrating that the learning process itself is a specific component of successful cooperative-board development.

Effect of Post-Training Mentoring on Leadership Competence

Post-training mentoring had a positive and significant effect, with $\beta = 0.285$, $t = 3.501$, and $p < 0.001$. Consultation, monitoring, follow-up evaluation, and problem-solving support help participants sustain their use of knowledge when facing operational constraints. This finding supports Grossman and Salas (2011) and Saks and Burke (2012), who emphasize post-training support as a condition for converting learning into workplace behavior. The result complements Indriani (2022) because it not only concerns increased knowledge following technical guidance but also demonstrates the contribution of post-training support to leadership competence.

Simultaneous Effects and Implications for Technical-Guidance Development

The significant simultaneous effect and R^2 of 0.416 indicate that technical guidance should be designed as a system integrating content, facilitators, learning processes, and follow-up. This finding is consistent with training-transfer models that connect instructional design with participant characteristics and the work environment (Blume et al., 2010). The remaining 58.4% of variation suggests the relevance of other factors, including organizational experience, learning motivation, self-efficacy, local-government support, organizational culture, and leadership style. This interpretation is consistent with Tafvelin and Stenling (2021), who identify motivation as an important element in leadership-training transfer.

The practical implications point to restructuring technical guidance as a continuous development cycle. The South Lampung Regency Office of Cooperatives and SMEs should prioritize practical and visual modules focused on decision-making and communication, use cooperative case simulations, combine bureaucratic and practitioner instructors, and establish zonal consultation clinics. Periodic evaluation of participant action plans can connect classroom activities with changes in cooperative-management practice. A uniform approach should be avoided because participants differ in age, education, and experience. Matrix 3 translates the statistical evidence into an implementation-oriented improvement framework.

Matrix 3. Evidence-Based Improvement Framework for Technical Guidance

Priority area	Research evidence	Recommended program action	Proposed monitoring indicator	Rationale
Material quality	Strongest predictor ($\beta = 0.395$)	Develop practical, visual, problem-based modules on decisions, communication, and cooperative operations	Participant ratings of relevance and clarity; module-use completion	Aligns content with job demands and the educational diversity of participants

Priority area	Research evidence	Recommended program action	Proposed monitoring indicator	Rationale
Learning methods	Second-strongest predictor ($\beta = 0.365$)	Increase case discussions, simulations, role plays, and group problem-solving	Participation in simulations; quality of case-based assignments	Converts abstract knowledge into practiced leadership behavior
Post-training mentoring	Significant predictor ($\beta = 0.285$)	Establish zonal consultation clinics, scheduled monitoring, and periodic action-plan reviews	Consultation use; action-plan progress; documented follow-up issues	Supports transfer when operational problems emerge after training
Instructor competence	Significant predictor ($\beta = 0.272$)	Use mixed teams of regulators, cooperative practitioners, and adult-learning facilitators	Instructor evaluation by subject mastery, facilitation, and feedback	Combines regulatory accuracy with practical relevance and effective delivery
Adaptive delivery	53.7% senior high school graduates; largest age group 41–50 years	Differentiate examples, pacing, visual aids, and support according to participant needs	Completion and comprehension patterns by education and age group	Reduces learning barriers in a heterogeneous participant population
Program evaluation	Model explains 41.6%; 58.4% remains outside the model	Add measures of motivation, self-efficacy, organizational support, culture, and experience in future evaluation	Expanded evaluation dataset and comparative model performance	Improves understanding of factors not captured in the current model

Source: Author's implementation matrix derived from the study findings; monitoring indicators are proposed for future use.

CONCLUSION

This study demonstrates that material quality, instructor competence, learning methods, and post-training mentoring have positive and significant partial and simultaneous effects on the leadership competence of Merah Putih Cooperative chairpersons in South Lampung Regency. Material quality was the most dominant predictor, followed by learning methods, post-training mentoring, and instructor competence. The model explained 41.6% of the variance in leadership competence and confirms that capacity development cannot rely on one-time material delivery. Technical guidance should be designed as a sequence linking relevant content, experiential learning, facilitators with both substantive and practical expertise, and structured support for field application. Local government is advised to develop practical visual modules, interactive simulations, combined bureaucrat-practitioner instructor teams, zonal consultation clinics, and periodic action-plan evaluation. Future research should incorporate organizational experience, learning motivation, self-efficacy, institutional support, organizational culture, and leadership style, and should consider mixed-methods designs or Structural Equation Modeling to explain competency-transfer processes more comprehensively.

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