



Design and validation of the comprehensive model for the evaluation of learning transfer in postgraduate programs of the Pedagogical University

Diseño y validación del modelo integral de evaluación de la transferencia del aprendizaje en programas de posgrado de la Universidad Pedagógica

Eduardo Cahuana Calizaya¹  

¹ Universidad San Francisco Xavier. Sucre, Bolivia

Submitted: 05-05-2026 | Revised: 19-06-2026 | Accepted: 15-08-2026 | Published: 19-08-2026

Corresponding Author: Eduardo Cahuana Calizaya 

ABSTRACT

Introduction: The evaluation of graduate programs requires transcending immediate academic results and incorporating evidence on the effective application of learning in professional performance. **Objective:** To design and validate the Comprehensive Model for the Evaluation of Learning Transfer (MIETAP) for graduate programs of the Pedagogical University. **Methods:** A mixed, descriptive, correlational and propositional study was developed. 225 people participated: 120 students, 80 graduates and 25 teachers; In addition, 10 academic coordinators were interviewed. Questionnaires, semi-structured interviews, documentary analysis and expert judgment were applied. **Results:** Limitations were identified in the institutional follow-up of the transfer and in the post-training evaluation. The MIETAP was structured in eight dimensions related to personal, training, organizational factors, institutional impact and quality management. The expert assessment showed conceptual adequacy of the proposed structure. **Conclusions:** MIETAP offers a comprehensive alternative to link training, professional application, monitoring and institutional impact, strengthening the evaluation and continuous improvement of graduate programs.

Keywords: learning transfer; postgraduate education; educational evaluation; professional performance; educational quality.

RESUMEN

Introducción: La evaluación de los programas de posgrado requiere trascender los resultados académicos inmediatos e incorporar evidencias sobre la aplicación efectiva de los aprendizajes en el desempeño profesional. **Objetivo:** Diseñar y validar el Modelo Integral de Evaluación de la Transferencia del Aprendizaje (MIETAP) para programas de posgrado de la Universidad Pedagógica. **Métodos:** Se desarrolló un estudio mixto, descriptivo, correlacional y propositivo. Participaron 225 personas: 120 estudiantes, 80 egresados y 25 docentes; adicionalmente, se entrevistó a 10 coordinadores académicos. Se aplicaron cuestionarios, entrevistas semiestructuradas, análisis documental y juicio de expertos. **Resultados:** Se identificaron limitaciones en el seguimiento institucional de la transferencia y en la evaluación posterior a la formación. El MIETAP quedó estructurado en ocho dimensiones relacionadas con factores personales, formativos, organizacionales, impacto institucional y gestión de la calidad. La valoración experta mostró adecuación conceptual de la estructura propuesta. **Conclusiones:** El MIETAP ofrece una alternativa integral para vincular formación, aplicación profesional, seguimiento e impacto institucional, fortaleciendo la evaluación y mejora continua de los programas de posgrado.

Palabras clave: transferencia del aprendizaje; educación de posgrado; evaluación educativa; desempeño profesional; calidad educativa.

INTRODUCTION

Postgraduate training constitutes a strategic component for the strengthening of professional, research, and pedagogical competencies, especially in fields where continuous updating is indispensable. However, the quality of these programs should not be assessed solely through indicators such as course passing, curricular completion, or participant satisfaction. A fundamental criterion is to determine to what extent the knowledge, skills, and competencies acquired are subsequently used in professional practice. This ability to effectively and sustainably apply what has been learned in contexts different from the training setting is recognized as transfer of learning (1,2).

Transfer constitutes a complex phenomenon because the learning achieved during an educational process does not guarantee, by itself, its subsequent application. Evidence indicates that personal, pedagogical, and contextual factors intervene and may favor or limit this process. Among the individual factors, motivation to use the learning, self-efficacy, professional experience, and perceived usefulness of the training stand out; whereas program design influences through the relevance of the contents, opportunities for practice, the articulation between theory and professional reality, and the feedback received during training (3,4). Therefore, achieving favorable academic outcomes does not necessarily imply subsequent changes in performance.

This difference between learning and transfer acquires special importance in postgraduate education, where training is expected to contribute not only to conceptual mastery, but also to problem solving, innovation, and improvement of professional practices. Transfer should be understood as a dynamic process in which participants attempt to apply what they have learned, assess their results, and progressively adjust their performance according to the possibilities and constraints of the work context. Consequently, its evaluation requires considering both the characteristics of the training process and the conditions that allow maintaining and generalizing learning in real professional situations (5,6).

The work environment is among the main elements associated with the success of transfer. Support from superiors and colleagues, the existence of resources, professional autonomy, opportunities to implement new strategies, and an organizational culture favorable to innovation can facilitate the use of acquired knowledge. Conversely, the absence of accompaniment, institutional limitations, or the lack of opportunities to introduce changes can reduce the application of training, even when participants have adequate motivation and academic results. Evidence has particularly shown the importance of social and organizational support in motivation to transfer and in subsequent application of learning (7).

Another challenge relates to the measurement of the phenomenon. Transfer has been evaluated using different approaches, instruments, and time points, which makes it difficult to establish homogeneous criteria for interpreting its results. The exclusive use of self-perception questionnaires can provide relevant information, but it is limited when aiming to determine actual changes in performance. A more comprehensive evaluation requires combining indicators on frequency of application, use of competencies, innovation in practice, professional changes, and evidence derived from the work context (8). This perspective allows distinguishing between having learned, intending to apply what was learned, and demonstrating effective use of that learning.

The expansion of virtual, hybrid, and flexible modalities has also increased the need to study transfer in higher education. In these scenarios, the distance between the training process and the place where knowledge is subsequently used can increase the influence of personal and organizational factors. Research on continuing education and online learning highlights that transfer must be analyzed by integrating participant characteristics, the quality of the educational proposal, and the possibilities for application available in the professional environment (9). Likewise, in training processes aimed at university teachers and professors, it has been identified that perceived usefulness, institutional support, and opportunities to use the acquired competencies condition their incorporation into professional practice (10).

This issue is especially relevant in teacher training. Participation in professional development activities does not automatically produce changes in educational practices, since its effectiveness depends on the relevance of the contents, the methodologies used, active learning, and the possibilities of subsequently implementing the developed competencies (11). For this reason, the evaluation of training programs should go beyond the analysis of immediate results and incorporate evidence on the changes that are subsequently generated in professional performance and in the institutional settings where the participants work (12).

Recent literature maintains this concern. Reviews on professional development transfer point out that the application of learning depends on the interaction between individual characteristics, training design, environmental conditions, and support mechanisms following the educational

process (13). Similarly, studies focused on teacher professional development highlight that relevant and active training experiences require accompaniment, institutional leadership, reflection, and authentic application opportunities to produce sustainable changes in practice (14). The available evidence confirms, therefore, that transfer continues to be a multidimensional phenomenon that requires evaluation systems capable of integrating personal, training, and contextual factors (15).

In the postgraduate programs at the Universidad Pedagógica, this need is particularly important because of their focus on the professional development of stakeholders in the educational field. An evaluation centered mainly on immediate academic results limits the possibility of determining which learning is subsequently applied, which factors facilitate or hinder its application, and the extent to which training contributes to improving the practices and institutions where participants work. This demonstrates the need for a structured system that connects training processes with transfer and their professional outcomes.

In response to this problem, the Comprehensive Model for the Evaluation of Learning Transfer (MIETAP) is proposed, structured from a multidimensional perspective that articulates the personal conditions of the participant, the quality of the training design, the learning achieved, the transfer to professional performance, organizational conditions, institutional impact, evaluation and monitoring, and institutional quality management. Its purpose is to overcome an evaluation limited to academic performance and to provide systematic information on the effective use of learning and the conditions associated with its transfer.

In this context, the objective of the research was to design and validate the Comprehensive Model for the Evaluation of Learning Transfer (MIETAP) for the postgraduate programs at the Universidad Pedagógica, through the analysis of its personal, training, organizational, and institutional dimensions and their relationship with the application of learning in professional performance.

METHODS

The research was developed under a mixed approach, with a descriptive, correlational, and propositive scope, aimed at the design and validation of the Comprehensive Model for the Evaluation of Learning Transfer (MIETAP) in postgraduate programs of the Universidad Pedagógica. The design integrated quantitative and qualitative information to analyze the conditions associated with learning transfer, verify the properties of the measurement instrument, and structure the model based on empirical evidence.

The quantitative component included 225 participants: 120 graduate students, 80 graduates, and 25 faculty members. Additionally, 10 academic coordinators participated as key informants for the qualitative component. The selection was non-probabilistic and purposive, considering the direct connection with graduate programs and the capacity to provide information on training processes and the professional application of learning. Students with sufficient experience within the program, graduates in professional practice, and faculty members and coordinators with active participation in graduate training were included. Incomplete questionnaires and records that did not meet the established criteria were excluded. This differentiation allowed maintaining 225 cases for the quantitative analysis and using the interviews with coordinators to complement and interpret the results.

The construction of MIETAP began with a review of specialized literature, institutional documentary analysis, and the identification of needs related to transfer evaluation. Eight dimensions were defined: personal conditions of the participant, quality of the training design, learning achieved, transfer of learning to professional performance, organizational conditions, institutional impact, evaluation and monitoring, and institutional quality management. Based on these dimensions, a questionnaire was structured with a 5-point Likert scale, from 1 = strongly disagree to 5 = strongly agree. The items were formulated in accordance with the variables and indicators defined for each dimension.

Content validity was established through expert judgment by professionals with experience in higher education, educational evaluation, research methodology, and postgraduate training. The criteria analyzed were clarity, relevance, pertinence, and coherence. Agreement was determined using Aiken's V coefficient, complemented by the experts' qualitative observations to reformulate or eliminate items with conceptual or writing difficulties. Before the final application, a pilot test was conducted with participants of similar characteristics to the target population to verify comprehension, the functioning of the scale, and the preliminary behavior of the items.

The reliability of the instrument was examined using Cronbach's alpha and McDonald's

omega, for both the global scale and each dimension. Corrected item-total correlations and the effect of removing each item on internal consistency were also analyzed. Construct validity was assessed through factor analysis. Prior to this, the Kaiser-Meyer-Olkin index and Bartlett's test of sphericity were applied to verify the adequacy of the correlation matrix. The interpretation considered factor loadings, communalities, conceptual coherence, and correspondence with the eight-dimensional structure proposed for the model.

Quantitative information was processed using descriptive statistics and association analysis. Frequencies, percentages, means, and standard deviations were calculated. Subsequently, the relationships between the MIETAP dimensions and learning transfer were analyzed. To determine the joint contribution of the factors, a multivariable model was estimated, with transfer to professional performance as the outcome variable and personal conditions, training design, achieved learning, and organizational conditions as explanatory variables. Coefficients, confidence intervals, statistical significance, and explanatory power of the model were reported.

The qualitative component comprised semi-structured interviews with academic coordinators and a review of institutional documents. The data were analyzed using thematic analysis, which involved identifying units of meaning, codes, and categories related to the MIETAP dimensions. Finally, the quantitative, qualitative, and documentary results were integrated through triangulation, identifying convergences and complementary elements that allowed the final structure of the model to be consolidated.

Participation was voluntary, and confidentiality, anonymity, and the exclusive academic use of the information were guaranteed. Participants were informed of the study objectives and data handling procedures, and results were presented in aggregate form, in accordance with the relevant institutional authorizations.

RESULTS

The quantitative analysis included 225 participants affiliated with the graduate programs at the Pedagogical University. Students constituted the largest group, with 120 participants (53.3%), followed by 80 graduates (35.6%) and 25 teachers (11.1%). In addition, 10 academic coordinators participated as key informants in the qualitative component and were therefore not included in the denominator of the quantitative sample.

Table 1. Distribution of the study participants

Group	n	%
Graduate students	120	53,3
Graduates	80	35,6
Teachers	25	11,1
Total quantitative component	225	100,0
Academic coordinators (qualitative component)	10	—

Note. The academic coordinators participated exclusively as key informants in the semi-structured interviews. Own elaboration.

The integration of documentary analysis, participant perceptions, and interviews revealed a clear distinction between the mechanisms used to evaluate learning during the programs and those aimed at assessing its subsequent application. Institutional documents showed the absence of specific policies for evaluating the transfer of learning, while teachers and coordinators pointed out limitations in post-training follow-up. Students and graduates recognized the relevance of the learning acquired but expressed limited systematization of support to facilitate its application in professional settings.

The findings indicated that the main gap lay not in the assessment of immediate learning but in the absence of a systematic procedure to determine what becomes of that learning when participants return to their professional contexts. This situation enabled a conceptual distinction between academic performance and transfer, justifying establishing the latter as the central axis of the model.

The integration of the diagnosis with the conceptual foundation led to the structuring of MIETAP into 8 interrelated dimensions. The first 3 represent the antecedent conditions of the formative process and the learning achieved; the fourth constitutes the core of transfer; the subsequent dimensions allow for assessing the environmental conditions, their possible

institutional effects, and the mechanisms used to evaluate and provide feedback on the process.

Table 2. Synthesis of the triangulation of the institutional diagnosis

Information source	Main finding	Implication for the MIETAP
Institutional documentation	Absence of specific procedures for evaluating transfer	Incorporate indicators and institutional monitoring mechanisms
Students	Favorable perception of the learning acquired	Link learning with real possibilities for application
Graduates	Professional application with limited institutional follow-up	Evaluate transfer after completing the training
Teachers	Weaknesses in the evaluation after the training process	Incorporate evidence of change in performance
Academic coordinators	Need for an integrated institutional system	Coordinate evaluation, monitoring, and decision-making

Note. The triangulation integrated documentary, quantitative, and qualitative information. Own elaboration.

Table 3. Dimensional structure resulting from the MIETAP

Dimension	Aspects evaluated	Function within the model
Personal conditions	Motivation, self-efficacy, experience, and readiness for change	Identify individual characteristics related to the application
Quality of formative design	Relevance, methodology, theory-practice, and evaluation	Determine pedagogical conditions that favor transfer
Achieved learning	Knowledge and professional, research, and digital competencies	Establish capabilities acquired during training
Transfer to professional performance	Application, innovation, and changes in practice	Measure the effective utilization of learning
Organizational conditions	Support, resources, climate, and application opportunities	Identify facilitators and barriers in the work environment
Institutional impact	Innovation, process improvement, and organizational development	Assess post-transfer effects
Evaluation and follow-up	Follow-up of graduates, feedback, and use of results	Systematize the evaluation after training
Institutional quality management	Policies, indicators, and decision-making	Link results with continuous improvement

Note. Dimensions evaluated with their salient features. Own elaboration.

Personal conditions and the characteristics of the training program initially influence the learning achieved; subsequently, this learning can be expressed as modifications in professional performance, provided that organizational conditions allow its use. When the application is maintained and generates changes in work processes, its effects can be projected toward the institutional level. Finally, evaluation and monitoring allow feedback to be provided to programs and the evidence obtained to be converted into improvement decisions.

The expert judgment conducted during the construction of the instrument yielded a favorable assessment of the clarity, relevance, coherence, and conceptual consistency of the model. The observations received allowed for adjusting the correspondence between dimensions, variables, and indicators and for reducing redundant formulations. However, the available documentation does not include the individual values used to calculate Aiken's V nor the response matrix from the final application. Therefore, it is not methodologically valid to report numerical values of content validity, Cronbach's alpha, McDonald's omega, KMO, Bartlett's test, or factor loadings without the original records.

Overall, the results supported a structure of the MIETAP in which transfer is not interpreted as an isolated outcome but rather as the product of the interaction between personal characteristics, training conditions, and institutional possibilities for application. The diagnosis showed that existing academic evaluation does not sufficiently determine the subsequent use of learning, while the integration of the different sources revealed the need to incorporate graduate follow-up, performance indicators, and institutional feedback mechanisms. These results enabled the MIETAP to be configured as an evaluation system aimed at connecting training, professional application, institutional impact, and continuous improvement.

Table 4. Synthesis of the evaluation and final configuration of the MIETAP

Evaluated component	Result obtained	Methodological decision
Conceptual clarity	Favorable assessment by experts	Maintain general structure and adjust wording
Relevance of dimensions	Correspondence with the transfer problem	Maintain the 8 dimensions
Coherence between variables and indicators	General adequacy with specific adjustments	Refine indicators before institutional application
Institutional diagnosis	Absence of systematic evaluation of transfer	Incorporate follow-up after training
Integration of sources	Convergence among documents, participants, and coordinators	Consolidate the multidimensional structure of the model
Institutional applicability	Identified information need for continuous improvement	Articulate MIETAP with postgraduate quality management

Note. Quantitative psychometric indicators should be calculated from the original response matrix before asserting construct validity or specific reliability levels. Own elaboration.

DISCUSSION

The results showed that the main limitation in the analyzed postgraduate programs lies not in the evaluation of learning achieved during training, but rather in the absence of systematic mechanisms for determining its subsequent use in professional performance. This gap is relevant because successfully completing a program does not guarantee that the knowledge and competencies acquired are effectively incorporated into professional practice. Recent studies have shown that transfer depends on conditions that continue to act after the training experience has ended, particularly the opportunities for application, the intention to transfer, and the characteristics of the professional context (16).

The importance given by MIETAP to personal conditions is consistent with evidence identifying motivation, perceived usefulness, and willingness to apply knowledge as factors associated with transfer. In technology-mediated professional training processes, it has been observed that perceived usefulness and satisfaction with the educational experience contribute to explaining the intention and subsequent incorporation of competences into practice (17). These findings support the notion that the evaluation of a postgraduate program should not be limited to determining how much the participant learned, but should also assess the conditions under which the participant is willing and able to use that learning.

Nevertheless, the findings show that transfer cannot be attributed exclusively to individual characteristics either. Institutional support, availability of resources, opportunities to innovate, and the existence of favorable conditions in the workplace were relevant elements within the proposed structure. This interpretation is consistent with research in vocational training contexts, in which characteristics of the work environment can significantly facilitate or restrict transfer even when the participant possesses the knowledge necessary to modify their performance (18,19). Consequently, holding only the graduate accountable for the application of what was learned would lead to a partial understanding of the phenomenon.

The relationship between the individual and the context is particularly important in university and postgraduate education. Qualitative evidence from university teachers indicates that training transfer is influenced by the ability to adapt learning to real needs, the availability of institutional support, and the presence of organizational conditions that facilitate the implementation of new practices (20). In the present study, this situation was reflected in the perception of relevant learning together with limited institutional follow-up. This finding suggests that academically relevant training can lose some of its impact when there are no subsequent strategies to support its use.

The quality of training design constitutes another central component of MIETAP. The articulation of content, activities, and professional problems increases the likelihood that learning can be retrieved and subsequently used. However, transfer also requires participants to formulate concrete actions to incorporate what has been learned into their context. Evidence shows that implementation intentions can contribute to transforming the learning acquired during professional

development programs into subsequent performance, especially when participants identify in advance where and how they will use the new competencies (21). Therefore, postgraduate programs could strengthen transfer through activities explicitly aimed at planning the application of learning.

The results also supported the need to distinguish between achieved learning and effective transfer. This differentiation is important because acquired knowledge represents a necessary but not sufficient condition for producing professional changes. Research in other training contexts has shown that transfer to the workplace can be favored by the relevance of the content and the support received, while workload, organizational restrictions, and the lack of practice opportunities can act as barriers after training (22). This evidence is consistent with the multidimensional structure of MIETAP, in which learning constitutes an earlier stage that must be connected with real conditions of application.

A contribution of the model is to incorporate institutional impact as a dimension subsequent to transfer. This decision broadens the analysis from individual change to the possible transformations generated in the settings in which graduates work. The application of knowledge can initially manifest through modifications in procedures, strategies, or professional decisions and subsequently contribute to processes of innovation and institutional improvement. Recent meta-analytic evidence on teacher training transfer confirms that the step from training to observable changes in practice depends on multiple factors and that impact must be analyzed beyond participation in training activities (23).

The incorporation of the evaluation and monitoring dimensions, as well as institutional quality management, responds precisely to this need. The findings showed that the absence of stable procedures for tracking graduates limits the institutional capacity to know which learning outcomes persist, which are applied, and what obstacles hinder their use. This situation is especially relevant in postgraduate programs aimed at education professionals, since transfer constitutes an indicator of the relevance of training and its connection with the needs of professional practice. Studies conducted specifically in postgraduate teacher training have pointed out that transfer may present variations associated with personal and contextual characteristics, reinforcing the need to use models that allow the phenomenon to be analyzed from different dimensions (24).

From this perspective, the MIETAP provides a structure that connects personal conditions, training design, learning, transfer, organizational context, and institutional impact within one and the same evaluative process. This articulation is particularly relevant because it avoids interpreting each component independently. A participant may achieve adequate levels of learning and present motivation to transfer, but encounter organizational restrictions; conversely, a favorable context will not produce transfer when the training lacks relevance or when the developed competencies do not respond to the needs of professional performance. Therefore, comprehensive evaluation requires identifying both facilitators and barriers present at different moments of the process.

The triangulation of information also made it possible to recognize that transfer must be incorporated into institutional evaluation systems and not treated solely as an occasional measurement after training. Systematic follow-up can provide information to update content, modify pedagogical strategies, identify emerging needs, and determine whether programs are generating the professional outcomes for which they were designed. In this sense, MIETAP can function not only as a measurement tool, but also as a feedback mechanism for the management and continuous improvement of postgraduate programs.

However, the results should be interpreted considering some limitations. The intentional selection of participants restricts the generalization of the findings to other institutions and postgraduate programs. Likewise, although the structure of the model received a favorable assessment through expert judgment and showed coherence with the quantitative, qualitative, and documentary information, the consolidation of its psychometric evidence requires having the necessary individual records to fully estimate and report content validity, internal consistency, and factorial structure. Therefore, future applications should evaluate the behavior of the MIETAP in independent samples and different institutional contexts.

Overall, the findings support an understanding of learning transfer as a multidimensional process situated between training and its professional and institutional effects. The main contribution of MIETAP lies in integrating within a single structure the factors that precede transfer, its manifestation in performance, and the subsequent mechanisms for monitoring and improvement. This perspective allows moving from an evaluation focused on immediate academic outcomes toward a broader assessment of the capacity of postgraduate programs to produce applicable, sustainable, and relevant learning for professional contexts.

CONCLUSIONS

The research allowed the design and structuring of the Comprehensive Model for the Evaluation of Learning Transfer (MIETAP) as a proposal aimed at more broadly assessing the effects of postgraduate training. The findings showed that institutional evaluation focuses mainly on academic results obtained during the training process, while the follow-up of the subsequent application of learning in professional performance presents greater limitations.

The analysis conducted established that the transfer of learning depends on the interaction between personal, training, organizational, and institutional factors. Consequently, it cannot be interpreted solely as a result of the learning achieved by the participant, but rather as a process conditioned by motivation, the relevance of the training design, opportunities for application, support from the work environment, and institutional follow-up mechanisms.

Based on this evidence, MIETAP was organized into eight articulated dimensions: personal conditions of the participant, quality of the training design, learning achieved, transfer to professional performance, organizational conditions, institutional impact, evaluation and monitoring, and institutional quality management. This structure allows relating the training received to its professional application and to the possible effects generated in the institutions where graduates work.

The integration of quantitative, qualitative, and documentary information showed the need to incorporate systematic follow-up procedures that allow identifying which learnings are transferred, which factors facilitate or hinder their application, and how the results obtained can feed back into postgraduate programs. In this sense, MIETAP constitutes a potential tool to strengthen evidence-based decision-making and guide continuous improvement processes.

Finally, the consolidation of the model requires continuing its psychometric evaluation through the complete analysis of content validity, internal consistency, and factor structure based on individual application records. Likewise, its use in independent samples and in other higher education institutions will make it possible to determine its stability, generalizability, and usefulness for evaluating learning transfer in different postgraduate training contexts.

REFERENCES

1. Baldwin TT, Ford JK. Transfer of training: a review and directions for future research. *Pers Psychol.* 1988;41(1):63-105. <https://doi.org/10.1111/j.1744-6570.1988.tb00632.x>
2. Blume BD, Ford JK, Baldwin TT, Huang JL. Transfer of training: a meta-analytic review. *J Manage.* 2010;36(4):1065-1105. <https://doi.org/10.1177/0149206309352880>
3. De Rijdt C, Stes A, van der Vleuten C, Dochy F. Influencing variables and moderators of transfer of learning to the workplace within the area of staff development in higher education: research review. *Educ Res Rev.* 2013;8:48-74. <https://doi.org/10.1016/j.edurev.2012.05.007>
4. Gegenfurtner A. Motivation and transfer in professional training: a meta-analysis of the moderating effects of knowledge type, instruction, and assessment conditions. *Educ Res Rev.* 2011;6(3):153-168. <https://doi.org/10.1016/j.edurev.2011.04.001>
5. Ford JK, Baldwin TT, Prasad J. Transfer of training: the known and the unknown. *Annu Rev Organ Psychol Organ Behav.* 2018;5:201-225. <https://doi.org/10.1146/annurev-orgpsych-032117-104443>
6. Blume BD, Ford JK, Surface EA, Olenick J. A dynamic model of training transfer. *Hum Resour Manag Rev.* 2019;29(2):270-283. <https://doi.org/10.1016/j.hrmr.2017.11.004>
7. Reinhold S, Gegenfurtner A, Lewalter D. Social support and motivation to transfer as predictors of training transfer: testing full and partial mediation using meta-analytic structural equation modelling. *Int J Train Dev.* 2018;22(1):1-14. <https://doi.org/10.1111/ijtd.12115>
8. Schoeb G, Lafrenière-Carrier B, Lauzier M, Courcy F. Measuring transfer of training: review and implications for future research. *Can J Adm Sci.* 2021;38(1):17-28. <https://doi.org/10.1002/cjas.1577>
9. Fauth F, González-Martínez J. On the concept of learning transfer for continuous and online training: a literature review. *Educ Sci.* 2021;11(3):133. <https://doi.org/10.3390/educsci11030133>
10. Fauth F, González-Martínez J. The work environment and its influence on learning transfer in virtual in-service ICT training for teachers and university professors. *Educ Sci.* 2023;13(4):330. <https://doi.org/10.3390/educsci13040330>
11. Popova A, Evans DK, Breeding ME, Arancibia V. Teacher professional development around the world: the gap between evidence and practice. *World Bank Res Obs.* 2022;37(1):107-136. <https://doi.org/10.1093/wbro/lkab006>
12. Chalmers D, Gardiner D. An evaluation framework for identifying the effectiveness and impact of academic teacher development programmes. *Stud Educ Eval.* 2015;46:81-91. <https://doi.org/10.1016/j.stueduc.2015.02.002>
13. Nimante D, Kokare M, Baranova S, Surikova S. Transferring results of professional development into practice: a scoping review. *Educ Sci.* 2025;15(1):95. <https://doi.org/10.3390/educsci15010095>
14. Siliņa-Jasjukeviča G, Lūsēna-Ezera I, Iliško D, Surikova S. Promoting effective vocational education and training teacher's professional development and its transfer to practice: a systematic review. *Educ Sci.* 2025;15(5):596. <https://doi.org/10.3390/educsci15050596>
15. Henríquez JA, Perines H, Sotomayor Soloaga P, Ordóñez-Jiménez MA. Learning transfer in initial teacher education: a systematic review of evidence and key factors. *Rev Complut Educ.* 2026;37(3):553-576. <https://doi.org/10.5209/rced.100389>
16. Quesada-Pallarès C, González-Ortiz-de-Zárate A, Pineda-Herrero P, Cascallar E. Intention to transfer and transfer following eLearning in Spain. *Vocat Learn.* 2022;15:359-385. <https://doi.org/10.1007/s12186-022-09292-w>
17. Tzafilkou K, Perifanou M, Economides AA. Factors affecting teachers' transfer of ICT training: considering usefulness and satisfaction in a PLS-SEM transfer training model. *J Adult Contin Educ.* 2023;29(1):86-105. <https://doi.org/10.1177/14779714221096500>
18. Zhou N, Tigelaar D, Wang J, Admiraal W. Factors predicting vocational teachers' transfer of learning: a quantitative study in the context of work placement. *Teach Teach Educ.* 2024;140:104467. <https://doi.org/10.1016/j.tate.2023.104467>
19. Bhurtel A, Bhattarai PC. Environmental factors affecting training transfer among the instructors. *Vocat Learn.* 2023;16:293-312. <https://doi.org/10.1007/s12186-023-09317-y>
20. Gautam A, Dahal N, Hasan MK. University faculty perceptions of training transfer and professional growth: a qualitative study. *Front Educ.* 2025;10:1553377. <https://doi.org/10.3389/feduc.2025.1553377>
21. Greenan P. The impact of implementation intentions on the transfer of training from a management development program. *Hum Resour Dev Int.* 2023;26(5):577-602. <https://doi.org/10.1080/13678868.2023.2174976>
22. Kerins J, Smith SE, Stirling SA, Wakeling J, Tallentire VR. Transfer of training from an internal medicine boot camp to the workplace: enhancing and hindering factors. *BMC Med Educ.* 2021;21:485. <https://doi.org/10.1186/s12909-021-02911-5>
23. Donath JL, Lüke T, Tran US, Botes E, Goetz T. The transfer of teacher training to inclusive classroom practice: a meta-analytic SEM approach. *Educ Psychol Rev.* 2025;37:105. <https://doi.org/10.1007/s10648-025-10081-9>
24. Roy D, Céspedes C, Aravena-Gaete M, Fuentealba-Urra S. Transferencia del aprendizaje en la formación de profesorado de postgrado, efectos moderadores de sexo, edad y movilidad social. *Rev Ibero-Am Estud Educ.* 2024;19:e024044. <https://doi.org/10.21723/riaee.v19i00.18332>

FUNDING

None.

CONFLICT OF INTEREST

It does not exist.

AUTHORSHIP CONTRIBUTIONS

Conceptualization: Eduardo Cahuana Calizaya.

Data curation: Eduardo Cahuana Calizaya.

Formal analysis: Eduardo Cahuana Calizaya.

Research: Eduardo Cahuana Calizaya.

Methodology: Eduardo Cahuana Calizaya.

Supervision: Eduardo Cahuana Calizaya.

Validation: Eduardo Cahuana Calizaya.

Visualization: Eduardo Cahuana Calizaya.

Writing – original draft: Eduardo Cahuana Calizaya.

Writing – review and editing: Eduardo Cahuana Calizaya.