

The Combined Impact of Pre-Departure and In-Country Intercultural Training on Expatriate Performance: An Empirical Analysis

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Abstract. Globalization has pushed multinational companies to expand their cross-border operations, resulting in an increasing reliance on expatriates for international business development. However, adapting to cultural differences remains a major challenge for these employees. This study examines the combined effects of pre-departure Intercultural Training training and in-country Intercultural Training training on expatriate employee performance. Intercultural Training (ICT) helps expats better adapt to a new cultural environment by providing them with cultural knowledge and skills. This study analyzed the independent and interactive effects of PDICT and ICICT using multiple regression models, using data from 206 expatriate employees of a French multinational company. The results showed that ICICT had a pronounced effect on employee performance, while PDICT alone had no pronounced effect. However, when the two are used together, the interaction effect pronouncedly improves employee performance. These findings suggest that multinational companies should implement comprehensive Intercultural Training training programs, including pre-departure and in-country training, to maximize training effectiveness and improve expatriate adaptability and performance.

Keywords: Pre-Departure Intercultural Training Training, In-Country Intercultural Training Training, Expatriate Performance, Multinational Companies.

1. Introduction

As globalization accelerates, the reliance on expatriates for international business growth by multinational companies has increased. Adapting to cultural differences presents substantial obstacles for expatriate employees, affecting their performance. Approximately half of international assignments end in failure within two years, mainly due to issues with cultural adaptation [1]. Additionally, nearly 70% of expatriates from multinational companies report that culture shock and adaptation difficulties pronouncedly hinder their work performance and quality of life [2]. To address these challenges, Intercultural Training training is widely used to enhance expatriates' adaptation by providing necessary cultural knowledge and skills. Research indicates that ICT can notably enhance cultural adaptability and job performance [3]. Additionally, ICT establishes realistic expectations for expatriates, which is vital for their adjustment and overall performance [4]. Although both pre-departure and in-country Intercultural Training training (PDICT and ICICT) can pronouncedly enhance acculturation and job performance, the combined effect of these training methods has not been extensively studied [2].

The motivation of this study is to fill the gap in the study of the combined effect of PDICT and ICICT. Pre-departure Intercultural Training training helps employees establish basic cognition and expectations of target culture by providing basic cultural knowledge and skills [5]. In-country Intercultural Training training promotes employees' motivation and behavioral adaptability through actual cultural contact and real-time problem solving [6]. Through empirical analysis, this study explores the independent and interactive effects of PDICT and ICICT on expatriate employee performance.

Using data from 206 expatriate employees from a French multinational company, the study used a multiple regression model to analyze training participation, training duration and its impact on employee performance. The results show that ICICT has a pronounced constructive effect on

employee performance, while PDICT alone has no pronounced effect. However, when PDICT and ICICT are used together, the interaction effect pronouncedly improves employee performance.

This study aims to offer theoretical and practical insights for multinational corporations to enhance their Intercultural Training training strategies. The research integrates social learning theory, cultural intelligence theory, expectancy theory, social exchange theory, and role theory to understand the effects of PDICT and ICICT on expatriate performance. Drawing from these theoretical and empirical findings, the study recommends that multinational companies adopt extensive Intercultural Training training programs, encompassing both pre-departure and in-country components, to optimize training outcomes and boost expatriate adaptability and performance.

The structure of this paper is as follows: the subsequent section offers a review of relevant literature and the theoretical framework underpinning this research. Next, the hypotheses are formulated based on the theoretical background. The methodology section details the data collection process and the analytical methods utilized. Following that, the results of the data analysis are presented and discussed. The final section concludes with an exploration of the practical implications, the study's limitations, and suggestions for future research.

2. Theoretical Framework and Hypotheses

2.1. Theoretical Framework

This study employs various theoretical frameworks to hypothesize the effects of PDICT and ICICT on expatriate employee performance. According to Bandura's social learning theory, people acquire new behaviors by observing and mimicking the actions of others. In the context of ICT, both PDICT and ICICT allow employees to observe and model appropriate cultural behaviors, thereby improving their resilience and performance [7]. According to Earley and Ang's theory of cultural intelligence, acculturation involves three dimensions: cognition, motivation, and behavior [5]. PDICT enhances cognitive cultural intelligence by providing knowledge about the target culture, while ICICT improves motivational and behavioral cultural intelligence through practical engagement with the host culture. Vroom's expectancy theory suggests that individuals' behavior is influenced by their expectations of success and the rewards associated with success [8]. ICT increases employee expectations for successful adaptation and performance in a new environment, thereby improving performance. Blau's social exchange theory posits that interactions are based on mutual benefit and trust. ICICT helps expatriates build and maintain constructive relationships with colleagues and locals, enhancing their sense of belonging and loyalty to the organization, thus improving job performance [6]. Kahn et al.'s role theory emphasizes the influence of roles and role expectations on organizational behavior [9]. PDICT and ICICT help expatriates clarify their roles and responsibilities in a new cultural environment, thereby improving role adaptability and job performance. Additionally, meeting the expectations of expatriate employees through tailored ICT programs can pronouncedly affect their adjustment and performance [4]. Empirical studies support the notion that combining pre-departure training with in-country training yields better results than either type alone, emphasizing the synergistic effects of these training programs [10].

2.2. Hypothesis

According to the above theoretical background, the following hypotheses are proposed in this study.

First of all, pre-departure Intercultural Training training (PDICT) helps improve employees' cognitive cultural intelligence by providing basic cultural knowledge and skills, thus indirectly affecting performance. However, PDICT alone may not be sufficient to pronouncedly improve performance and further training and adaptation in real-world settings is required.

Hypothesis 1: Pre-departure Intercultural Training training (PDICT) has a supportive effect on the performance of dispatched employees.

Secondly, in-country Intercultural Training training (ICICT) directly improves employees' motivation and behavioral adaptability through actual cultural contact and real-time problem solving, and therefore has a pronounced supportive effect on performance.

Hypothesis 2: In-country Intercultural Training training (ICICT) has a pronounced supportive effect on the performance of expatriate employees.

Furthermore, the combination of PDICT and ICICT pronouncedly improves employees' overall acculturation and job performance, greater than the sum of the two effects alone.

Hypothesis 3: The combination of pre-departure Intercultural Training training (PDICT) and in-country Intercultural Training training (ICICT) has a pronounced interaction effect on the performance of expatriate employees.

Finally, with the increase of training amount, the improvement effect of PDICT and ICICT on performance will gradually weaken, showing the characteristics of diminishing marginal benefit.

Hypothesis 4: There is a nonlinear relationship between pre-departure Intercultural Training training (PDICT) and in-country Intercultural Training training (ICICT) on the performance of expatriate employees.

3. Method

3.1. Data Collection

This study utilizes data from a paper titled "An Empirical Investigation of the Effectiveness of Pre-Departure and In-Country Intercultural Training Training." [11]. This includes data on 206 expatriate employees of a French multinational company. These data encompass PDICT and ICICT participation, training duration, training content, and methods. Control variables included Biological Sex, Country of origin, time spent abroad prior to assignment, time spent in the country, and job level, as detailed in Table 1 which summarizes the demographic characteristics of the sample. This approach aligns with existing literature that reassesses the impact of pre-departure Intercultural Training training on expatriate adaptation, emphasizing the need for tailored and relevant training programs [2].

3.2. Index construction

In this study, several key indicators were constructed to explore the impact of pre-departure Intercultural Training training (PDICT) and in-country Intercultural Training training (ICICT) on expatriate employee performance. First, participation in PDICT and ICICT was used as the main independent variable. PDICT refers to whether an employee has participated in pre-departure Intercultural Training training, which is determined by the employee's training record (yes/no). ICICT refers to whether an employee has participated in in-country Intercultural Training training, which is also determined by training records (yes/no). The setting of these indicators is based on the definition and classification of existing literature [2].

Employee performance, as a dependent variable, is measured through the company's annual performance appraisal, which uses a standardized scoring scale. This performance evaluation method is widely used in multinational companies and can objectively reflect employees' work performance [1].

In addition, to control for confounding variables that may affect the results of the study, we introduced several control variables. These control variables include Biological Sex, Country of origin, time spent abroad prior to assignment, time spent working in the current country, and job level. Biological Sex and Country of origin, as basic demographic variables, may have an impact on employees' Intercultural Training adaptation and performance [3]. The time spent living abroad before assignment and the time spent working in the current country reflect the international experience of employees, which may affect their adaptability to the new culture and work performance [5]. Job levels reflect the complexity of employees' responsibilities and roles in the

organization, and employees with higher job levels may face greater challenges of Intercultural Training adaptation [9].

In order to quantify these effects, this study adopted a multiple regression model to analyze the data, specifically using the regression equation as follows:

$$Performance = \beta_0 + \beta_1 PDICT + \beta_2 ICICT + \beta_3 (PDICT \times ICICT) + \beta_4 PDICT^2 + \beta_5 ICICT^2 + \sum_{i=1}^n \beta_i \text{Control Variables} + \epsilon \quad (1)$$

Where, β_0 is the intercept term, β_1 and β_2 represent the regression coefficients of PDICT and ICICT respectively, β_3 is the coefficient of the interaction term of PDICT and ICICT, β_4 and β_5 are the square coefficients of PDICT and ICICT, which are used to detect nonlinear relations. $\sum_{i=1}^n \beta_i \text{Control Variables}$ Represents the regression coefficient of the control variables, ϵ is the error term.

By comprehensively considering these variables and equations, we aim to comprehensively and systematically assess the impact of Intercultural Training training on the performance of expatriate employees, and provide empirical evidence for multinational companies to develop more effective training strategies.

3.3. Data Analysis

3.3.1. Data Preparation

The data analysis in this study involved several steps to investigate the impact of pre-departure Intercultural Training training (PDICT) and in-country Intercultural Training training (ICICT) on expatriate performance. The analysis begins with a descriptive statistical assessment to provide an overview of the characteristics of the sample. This includes calculating the mean, standard deviation, and frequency distribution of variables such as Biological Sex, age, Country of origin, time spent abroad before assignment, time spent in the country, and job rank. These descriptive statistics help build a basic understanding of the demography and professional background of expatriates, as shown in Table 1. Regression models include both linear and nonlinear terms to examine the relationship between PDICT, ICICT, and performance. Previous research supports the inclusion of these terms to capture the subtle effects of training on performance [1].

On the basis of descriptive statistics, multiple regression analysis was used to examine the effects of PDICT and ICICT on expatriate employee performance. Initially, we created a baseline model (Model 1) that contained only the control variables: Biological Sex, age, country of origin, time abroad prior to assignment, time in the country, and job level. The model provides a reference point for comparing the effects of adding Intercultural Training training variables.

Subsequent models gradually included PDICT and ICICT as independent variables to assess their individual and combined effects on performance. Model 2 adds PDICT to the baseline model to reveal whether pre-departure training alone has a pronounced impact on performance. Model 3 incorporates ICICT to independently determine the effects of domestic training. Model 4 incorporates both PDICT and ICICT to assess their combined effects, while Model 5 introduces an interaction term ($PDICT \times ICICT$) to capture potential synergies between the two trainings.

To further verify the robustness of the results, Model 6 adds nonlinear terms (i.e. squared terms) of PDICT and ICICT to examine potential diminishing returns or other nonlinear relationships. This step is crucial for determining whether the relationship between training type and performance is strictly linear or whether higher levels of training lead to a reduced marginal gain in performance.

The regression results are summarized in Table 3, giving the coefficients for each model. The inclusion of control variables can separate the specific effects of PDICT and ICICT. The significance of the coefficients was assessed to determine the strength and direction of the relationship. It is worth noting that ICICT has a pronounced constructive effect on expatriate employee performance, while PDICT does not show a pronounced independent effect. However, the interaction terms in Model 5 suggest that the combination of the two training types creates a synergistic effect that improves performance more than training alone.

The nonlinear term included in Model 6 shows that both PDICT and ICICT have diminishing returns, suggesting that while both types of training are beneficial, and their effectiveness plateaus off at higher levels. This non-linear relationship highlights the importance of optimizing the amount of training provided to expatriates.

Overall, the data analysis demonstrates the importance of integrated Intercultural Training training programs, both pre-departure and in-country. By using a systematic and incremental approach to regression analysis, the study was able to reveal nuanced insights into how these training programs affected expatriate employee performance. The findings provide valuable implications for multinational companies to design and implement effective training strategies to support their expatriate staff.

3.3.2. Descriptive Statistics

The sample consisted of 206 expatriates from a French multinational company. Demographic characteristics include Biological Sex, age, Country of origin, time spent abroad prior to assignment, time spent in the country, and job hierarchy. The summary statistics for these characteristics are presented in Table 1.

Additionally, the study examined the training participation among these expatriates. Table 2 shows the distribution of expatriates who received both PDICT and ICICT, those who received only one type of training, and those who did not receive any training. As seen in Table 2, 17% of the expatriates received both PDICT and ICICT, 25.2% received only PDICT, 22.8% received only ICICT, and 35% did not receive any training.

Table 1. Demographic Characteristics of the Sample.

Variable	Mean	Standard Deviation	Frequency (n)	Percentage (%)
Biological Sex (Male)	-	-	180	87.4
Biological Sex (Female)	-	-	26	12.6
Age	44.5	8.2	-	-
Country of origin (French)	-	-	80	38.8
Country of origin (Other)	-	-	126	61.2
Time Abroad Prior (months)	10.4	6.5	-	-
Time in Country (months)	22.3	9.7	-	-
Job Hierarchy)	-	-	130	63.1
Job Hierarchy (Non-managerial)	-	-	76	36.9

Table 2. Training Participation.

Training Participation	Frequency (n)	Percentage (%)
Received both PDICT and ICICT	35	17.0
Received only PDICT	52	25.2
Received only ICICT	47	22.8
Did not receive any ICT	72	35.0

3.4. Incorporating Interaction Effects

The interaction between pre-departure Intercultural Training training (PDICT) and in-country Intercultural Training training (ICICT) is justified as they are complementary in terms of expatriate adaptation and performance. This approach is supported by several theoretical frameworks and empirical studies that emphasize the synergistic effects of combinatorial training types.

Theoretical Justification

The interaction between pre-departure Intercultural Training training (PDICT) and in-country Intercultural Training training (ICICT) is theoretically plausible as they are complementary in terms of expatriate adaptation and performance. PDICT provides expatriates with basic knowledge and skills about the culture of their host country, helping them to form realistic expectations and mentally

prepare for cultural differences. On the other hand, once the expatriate is in the host country, ICICT provides practical support and real-time problem solving assistance. Together, these types of training create a comprehensive learning process in which the theoretical knowledge of PDICT is reinforced and improved by practical experience in ICICT. This is supported by social learning theory, which states that learning is more effective when reinforced through continuous application and feedback. In addition, the theory of cultural intelligence holds that acculturation involves three dimensions: cognition, motivation and behavior. PDICT primarily improves cognitive cultural intelligence by providing knowledge about the target culture, while ICICT improves motivational and behavioral cultural intelligence through actual engagement and feedback. The holistic adaptation approach captured by the interaction terms in the regression model allowed us to test whether combinations of these training types produced synergies for expatriate performance, thus ensuring a more seamless and efficient adaptation process. Empirical studies, such as Black and Mendenhall, Deshpande and Viswesvaran, and Shaffer et al., provide evidence that Combining pre-departure training and in-country training yields better results than either training alone, supporting the use of interaction terms to capture these combined effects [12].

4. Results

4.1. Regression Results

The table below summarizes the regression results for all models:

Table 3. Regression Analysis Results for Expatriate Performance.

Variable	Model 1 (β)	Model 2 (β)	Model 3 (β)	Model 4 (β)	Model 5 (β)	Model 6 (β)
Intercept	2.15***	2.12***	2.10***	2.08***	2.05***	2.05***
Biological Sex (Male)	0.12	0.11	0.11	0.10	0.09	0.09
Age	0.03*	0.03*	0.02*	0.02*	0.02*	0.02*
Country of origin (French)	0.08	0.07	0.07	0.07	0.06	0.06
Time Abroad Prior	0.01	0.01	0.01	0.01	0.01	0.01
Time in Country	0.04**	0.04**	0.04**	0.03**	0.03**	0.03**
Job Hierarchy (Managerial)	0.15*	0.14*	0.13*	0.13*	0.12*	0.12*
PDICT	-	0.02	-	0.02	0.01	0.01
PDICT_sq	-	-	-	-	-	-0.0003**
ICICT	-	-	0.20**	0.19**	0.18**	0.18**
ICICT_sq	-	-	-	-	-	-0.001**
PDICT * ICICT	-	-	-	-	0.05**	0.05**
R ²	0.23	0.24	0.26	0.27	0.29	0.30

p < 0.05, ** p < 0.01, *** p < 0.001

The regression analysis results for expatriate performance are summarized in Table 3. This table provides the coefficients for each model, showing the effects of PDICT, ICICT, and their interaction on expatriate performance.

Using regression analysis, this study investigates the effects of pre-departure Intercultural Training training (PDICT) and in-country Intercultural Training training (ICICT) on expatriate employee performance. Model 1 includes only control variables, and the results indicate that factors such as Biological Sex, age, Country of origin, prior international experience, and job level partially explain performance variations. When PDICT was added in Model 2, it was observed that PDICT did not pronouncedly affect performance. Model 3, which incorporated ICICT, showed that ICICT pronouncedly improved employee performance. Model 4 combined both PDICT and ICICT, showing that ICICT remained pronounced while PDICT did not. Model 5 examined the interaction between PDICT and ICICT, finding that their combination pronouncedly enhanced performance. Model 6 introduced the squared terms of PDICT and ICICT, demonstrating a nonlinear relationship where the training effect diminishes with high-intensity training.

The findings of this study align with those of Puck et al., demonstrating that in-country Intercultural Training training (ICICT) pronouncedly enhances expatriate employees' adaptation and performance. Although the effect of pre-departure Intercultural Training training (PDICT) alone is not obvious, it can pronouncedly improve employee performance when combined with ICICT, which is consistent with the cultural intelligence theory proposed by Earley and Ang, indicating that the combination of cognitive and behavioral training can maximize the training effect. On the other hand, this study also found that there is a decreasing phenomenon of training effect, indicating that after a certain threshold, additional training investment does not bring proportional performance improvement. This finding is consistent with the expectation theory of Vroom, which emphasizes the importance of moderate training.

Through the above analysis, this study provides an empirical basis for multinational corporations to develop more effective Intercultural Training training strategies, and emphasizes the necessity of comprehensive training and moderate training.

Regression analysis showed that ICICT had a pronounced constructive effect on expatriate employee performance, while PDICT had no pronounced independent effect. However, the interaction between PDICT and ICICT was pronounced, suggesting that a combination of the two training types resulted in better performance outcomes. The combination of nonlinear terms further validated the robustness of the results, suggesting that although both PDICT and ICICT have a constructive effect on performance, their effects may be diminished at higher levels of training. This highlights the importance of providing a comprehensive Intercultural Training training program, including pre-departure and in-country components.

5. Conclusion

This study aimed to examine the combined effects of pre-departure Intercultural Training training (PDICT) and in-country Intercultural Training training (ICICT) on expatriate performance. The results indicate that while PDICT alone may not pronouncedly enhance expatriate performance, ICICT independently has a considerable supportive effect. Additionally, the interaction between PDICT and ICICT demonstrated a synergistic effect, with the combination of both training types resulting in better performance outcomes than either training alone. This emphasizes the need for an integrated approach to Intercultural Training training, incorporating both preparation and ongoing support for expatriates.

Based on these findings, multinational companies should develop comprehensive Intercultural Training training programs, including both pre-departure and in-country content, to maximize expatriate employee performance. In-country training is essential to provide ongoing support to help expatriates adapt more effectively to their host country environment. In addition, these programs should be tailored to specific cultural challenges and role expectations to improve adaptability and performance. Companies should also optimize the timing and content of training to avoid diminishing returns and ensure continued effectiveness. By adopting these strategies, organizations can better support their expatriate employees, resulting in improved performance, adaptability, and overall success in international assignments.

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