

# The Impact of Employee Training on Huawei innovation Performance in Shanxi Province, China

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**Received** February 23, 2021; **Revised** June 5, 2021; **Accepted** June 27, 2021

## Abstract

This study underpins on the case of Huawei in Shanxi Province, China, for studying the roles of employee training in contributing towards the innovation performance of the company. As the terminal department, Huawei authorizes the experience stores (HAES), whose employees can more truly understand customers' needs, leading to China's first Huawei 5G smart experience store being opened in Shanxi Province.

The population is 9478 employees of Huawei in HAES in Shanxi Province, spanning all the technical research and development, product production, sales, service and other job functions. This paper adopts the mix method with in-depth interview and questionnaire survey, and SPSSAU is used for data analysis. Quantitative statistics focus on the validity and reliability assessments of the questionnaire instrument, the correlations analysis and the linear regression. The analysis results show that there is a positive impact of employee training on Huawei innovation performance. The conclusion is that they become the most important part of employee training and need to be constantly updated, including collaborative innovation culture and atmosphere, innovative service concept, innovation promotion and innovation service incentive mechanism, employees' enthusiasm, initiative and creativity, the promotion of brand culture, feedback Mechanism, etc.

**Keywords:** Employee training; innovation performance; collaborative innovation culture and atmosphere; innovative service concept; employee creativity.

## **Introduction**

Huawei Group is a typical Chinese and a global enterprise. Under the corporate umbrella of Huawei Group, there are many highly competitive enterprises, all of which contributing to technical collaborative innovation. However, as an important part of Huawei's terminal business, Huawei Authorized Experience Stores (the abbreviation HAES is used) is the most direct organization to contact the end consumers. The employees of the authorized experience stores have direct contacts with the final consumers, and they know the real needs of customers best, and thus, they are vital in bringing the products of technological innovation cooperation to consumers. Therefore, Huawei's success in the technological markets is due to the promotion of employee-customer technical collaborative innovation and is based on employee-oriented vitality, customer-centered, value-oriented and customer-demand-oriented innovation. Effective cooperation between employees and customers will have a positive impact on Huawei's enterprise performance.

## **Research Objectives**

The purpose of this paper is to examine the relevance of technical employee training on Huawei innovation performance through employees' understanding for customers' needs. Externally, Huawei focuses on technological innovation, product innovation and service innovation, and takes customers as the center to create value for customers. The source of all innovation is the ecosystem formed by Huawei's employees and other stakeholders, including suppliers, partners, industry organizations, standards organizations and other industry-university-research institutions. On this basis, open-source effective cycle is realized to achieve long-term sustainable innovation and development.

## **Research Methodology**

The paper employed mixed qualitative and quantitative methods with random sampling in sample selection. Qualitative method is in-depth interview. Quantitative methods is questionnaire survey. Huawei authorized stores in Shanxi Province were randomly sampled. From June to September 2020, the author has in-depth interviewed with total of 30 employees including 3 field masters, 3 store managers, 3 supervisors, 9 sale consults and 12 others, including other relevant employees in charge of technical services and terminal business department of Huawei authorized experience stores in Shanxi Province.

The 404 employees of the authorized experience stores were randomly selected based on the ability to be interviewed and investigated easily, decision on availability of respondents during interviews.

The total population refers to the entire collection of objects to be studied. The population for this article is 9478 employees of 158 Huawei authorized experience stores in Shanxi province, China. These employees include all the employees affiliated to Huawei Group and Huawei's terminal business division who are related to the business and technology related to Huawei authorized experience stores, including all the members who are responsible for solving the problems of products, services and technologies of Huawei authorized experience stores in Shanxi Province.

This study adopts a combination of qualitative and quantitative empirical research methods, selects samples through random sampling, and obtains research data through in-depth interviews and questionnaire surveys.

The sample size of the questionnaire-based survey is calculated using the formula of Taro Yamane (1973), shown in Equation (1), with a confidence level of 95%, as follows:

$$n = N / (1 + Ne^2) \tag{1}$$

n = required sample size  
 N = total population  
 e = the error of 5 percentage points

After substituting the total number of population in this study into the Yamane formula to calculate the required number of sample size, it yields at least 384 persons ( $n=9478/(1+9478 \times (0.05)^2)$ ). In order to obtain reliable of data, 418 questionnaires were sent out. 414 questionnaires were returned. 404 questionnaires were effective. If the error rate of 5% is excluded and all the questionnaires are valid, it is reasonable to return 404 questionnaires.

The conceptual framework of the study is given in Fig. 1, being described by the hypothesis H1, H1a, and H1b.

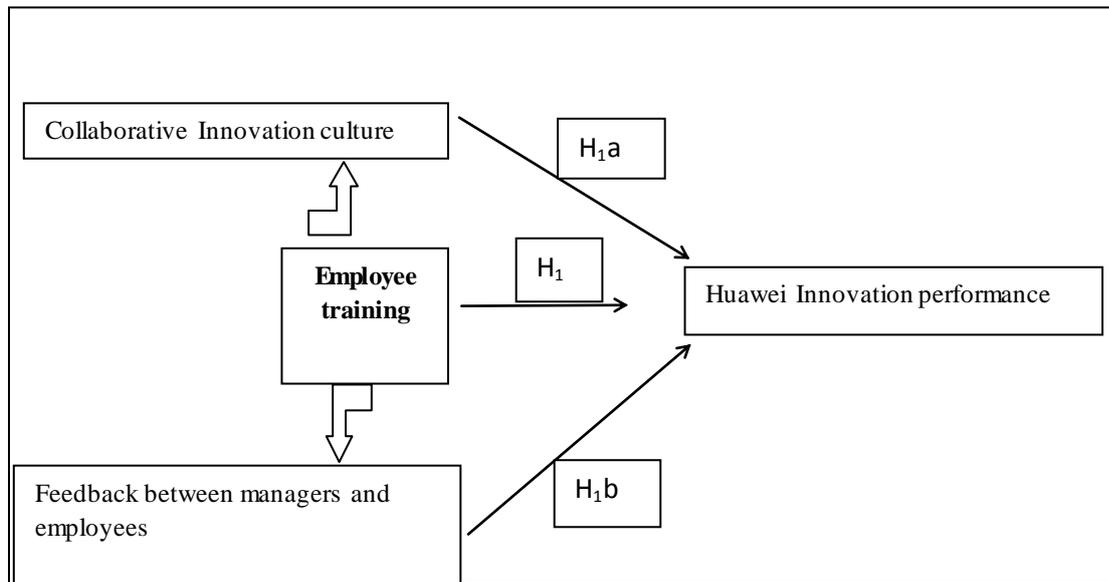


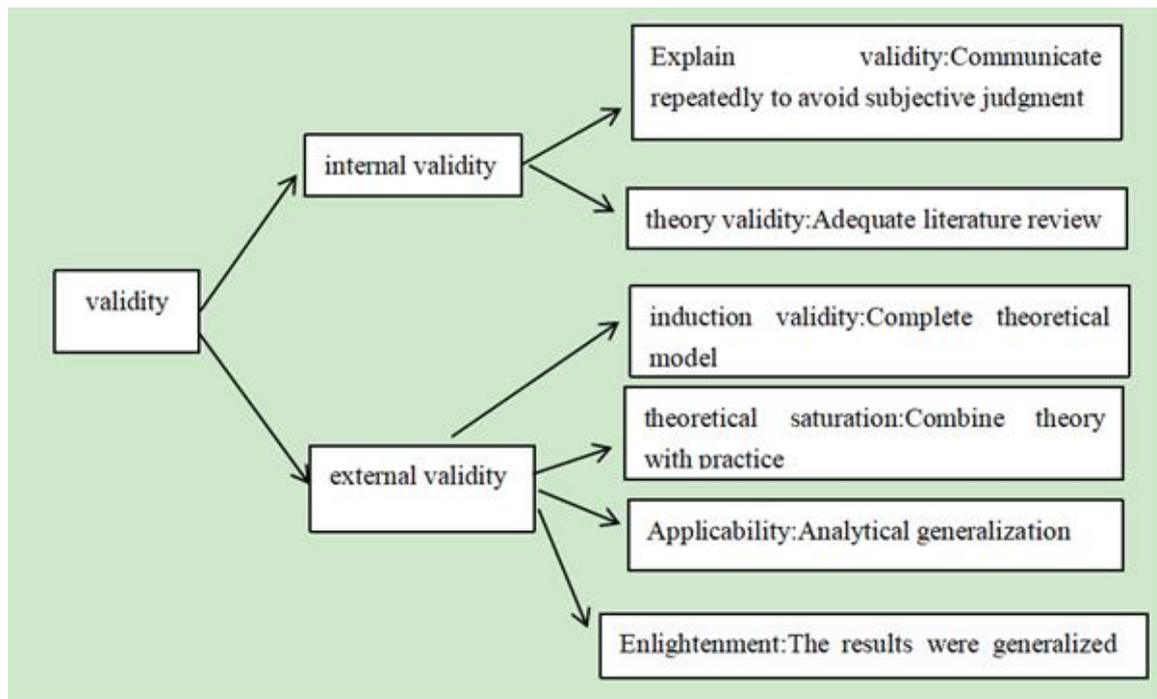
Fig. 1. Research conceptual framework

H<sub>1</sub>: There is an important influence between employee training and Huawei's innovation performance.

H<sub>1a</sub>: There is a significant correlation between the collaborative innovation culture and Huawei's innovation performance.

H<sub>1b</sub>: There is an obvious mechanism between the feedback between managers and employees and Huawei's innovation performance.

The qualitative data were collated to figure out the proportion of each answer to each question. The quantitative data collected were analyzed. The data was organized into themes in order to determine the impact of Huawei's technical collaborative innovation on Huawei enterprise performance from the perspective of Huawei authorized experience stores' employees. Fig. 2 illuminates the validity strategies of the content analysis, adapted from Li (2014).



**Fig. 2.** The validity strategy of content analysis (Source: Adapted from Li, 2014).

## Research Results

Prior to performing the regression analyses, the correlations were performed, and the highly correlated relationships are evidenced in the Pearson coefficients in Table 1. Clearly, the factors shown in Table 1 are conducive to employees and their training in order to contribute to innovation performances of the company.

**Table 1.** Correlations between innovation performance and its determinants

	Innovation Performance
Corporate and innovative cultural atmosphere	0.699** (P = 0.000)
Innovative service concept	0.692** (P = 0.000)
Innovation promotion, innovation service reward mechanism	0.663** (P = 0.000)
Employee's enthusiasm, initiative and creativity	0.732** (P = 0.000)
The promotion of innovative brand and innovative culture	0.666** (P = 0.000)

Specifically, the regression analysis in Table 2 shows that “innovation service concept in employee training” can explain 66.1 per cents of the variance of innovation performance.

**Table 2.** Innovation performance explained by innovation service concept in training

Linear regression analysis results			
Independent variable	Regression coefficient	VIF	
	0.771 (6.079**)	-	
Innovative service concept in employee training	0.822 (28.023**)	1.000	
Sample size	404		
R <sup>2</sup>	0.661		
Adjust R <sup>2</sup>	0.661		
F value	F (1,402) = 785.314, p=0.000		
Dependent variable: innovation performance			
D-W value : 1.844			
* p<0.05 ** p<0.01 () is t value			
ANOVA			
	Sum of Square	df	Mean Square
Regression	130.560	1	130.560
Residual	66.833	402	0.166
Total	197.394	403	

From the data in Table 3, it can be known that the fit of the model is 57.1%. F value indicates that the model has passed the F test, and the model construction is meaningful.

**Table 3.** Innovation performance determined by feedback in employee training

Linear regression analysis results			
Independent variable	Regression coefficient	VIF	
	0.751 (4.933**)	-	
Feedback in employee training	0.816 (23.116**)	1.000	
Sample size	404		
R <sup>2</sup>	0.571		
Adjust R <sup>2</sup>	0.570		
F value	F (1,402) = 534.340, p=0.000		
Dependent variable: innovation performance			
D-W value : 1.914			
* p<0.05 ** p<0.01 () is t value			
ANOVA			
	Sum of Squares	df	Mean Square
Regression	123.863	1	123.863
Residual	93.186	402	0.232
Total	216.050	403	

## Discussion

The three hypotheses of the same root of H1 are supported.

H<sub>1</sub>: There is a significant positive correlation between employee training and Huawei's innovation performance.

H1 is supported by both the correlations and regression analyses. The finding also reinforces a question raised by Oana-Maria et al. (2017) in how leaders think about bridging the innovation gap between new products, new services, new business models, and between their own businesses and other businesses, to achieve leapfrog innovation. By understanding the real needs of customers and strengthening the innovation cooperation between enterprises and customers, employees can promote the technological innovation of enterprises and this is the most appropriate way to reduce the innovation gap.

Rooted in H1 is the two sub-hypotheses H<sub>1a</sub> and H<sub>1b</sub>.

H<sub>1a</sub>: There is a strong positive correlation between the collaborative innovation culture and Huawei's innovation performance.

In addition, employees must have the attitude in order to come up with and developing innovations. The employees are constantly thinking of how their processes could be improved upon. Creativity comes as standard equipment with everyone who works in your organization. Everyone is creative and that includes the end users of innovation. Users are not simply passive customers of new products or services, and they generally have plenty of ideas about of how they would like to improve or change what they are using.

H<sub>1b</sub>: There is an obvious positive correlation between the feedback between managers and employees and Huawei's innovation performance.

Feedback between managers and employees are vital, as it can help mold the working attitude and behavior of employees, which, then guide purposeful activities that the company organizes employees to learn and apply the training to their work practice, aiming to improve employees' professional knowledge and professional skills. At the same time, it is more effective to motivate employees to innovate in their work, and to achieve benign and professional communication with customers. The finding here supports Qin (2017) that the environment the enterprise created for employees to acquire or learn knowledge and skills is closely related to their job requirements in order to meet their own needs.

## New Knowledge

Huawei adopts independent management and decision-making, and open and transparent communication. Huawei is a 100% employee-owned private enterprise. Employees are the vitality and creators of Huawei's sustainable development and innovation. Employee training, collaborative innovation culture, innovative ideas, innovation atmosphere,

feedback mechanism, etc. have become effective links between employees and the organization, and encourage employees and organizations to improve together Innovation performance. Based on the findings of this research, the following strategies are to be stressed:

First, Huawei should build a training system that is conducive to employee innovation.

Second, Huawei should create an innovative organizational learning atmosphere and platform.

Third, Huawei should strengthen employee innovation consciousness and learning behavior.

Specially, employee training has become one of the most important links for Huawei to achieve effective innovation, and needs to be constantly updated, including collaborative innovation culture and atmosphere, innovative service concept, innovation promotion and innovation service incentive mechanism, employees' enthusiasm, initiative and creativity, the promotion of brand culture, feedback Mechanism, etc.

## Suggestion

It is suggested that further research can be enlightened with richness, by comparative study within others, for comparing their strategies and operational processes for HR training and focus on talent management, resource-based management and knowledge management, and Delphi assessments.

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