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# EVALUATING THE EFFECTIVENESS OF A PROJECT MANAGEMENT EDUCATIONAL TRAVEL IN HONG KONG REGION: AN APPLICATION AND VALIDATION OF THE KIRKPATRICK'S FOUR-LEVEL MODEL

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**Abstract:** This research evaluates the effectiveness of the Hong Kong educational travel program for the Project Management course at Guangzhou Huashang College based on the Kirkpatrick Model. Research findings reveal: Overall program effectiveness was strong (total mean 4.24); the Reaction level (4.52) and Learning level (4.49) demonstrated excellent performance, while the Behavior level (4.12) and Results level (3.83) scored relatively lower. Site visits within the study tour significantly enhanced knowledge acquisition and long-term career awareness. Based on these findings, the research validates the effectiveness of the Kirkpatrick Model in evaluating educational travel, clarifies the core value of corporate visits, and proposes specific improvement recommendations such as optimizing itinerary details and strengthening knowledge transfer. This provides empirical evidence for designing and optimizing project management practice-oriented teaching.
**Keywords:** Kirkpatrick model; Educational travel; Project management

## 1 INTRODUCTION

In 2025, the Ministry of Education and Guangdong Province jointly released the "Plan for Promoting the Cooperative Development of Higher Education in the Guangdong-Hong Kong-Macao Greater Bay Area." This plan positions Greater Bay Area education as the core of building an "International Education Demonstration Zone," proposing to establish an educational innovation ecosystem supporting high-quality regional development through three pathways: diversified collaborative education, shared research resources, and joint talent cultivation.The strategic goal of establishing the Greater Bay Area as an international science and technology innovation hub imposes new demands on high-level project management professionals: they must possess cross-cultural collaboration skills, a vision for technology transfer, and practical expertise in complex scenarios. Developmental needs drive educational innovation.

For universities currently developing internationally integrated courses, the need to establish an evaluation system that measures the effectiveness of educational travel projects. The Kirkpatrick Evaluation Model, proposed by internationally renowned scholar Kirk Patrick in 1959, stands as one of the most widely applied training effectiveness frameworks. It is frequently utilized globally for assessing teaching and learning outcomes. This model comprehensively covers all dimensions of the study-travel process, encompassing four levels: Reaction, Learning, Behavior, and Result.

This reseach comprehensively evaluates the effectiveness of educational travel practical teaching, exemplified by the Project Management course at Guangzhou Huashang College, based on the Kirkpatrick Model. The Reaction Level reveals the course design's appeal and initial learner engagement by focusing on students' immediate perceptions, interest, and satisfaction with the training. The Learning Level quantifies instructional outcomes by assessing students' transition from passive listening to active inquiry, along with changes in cross-cultural communication and project planning. The behavioral layer verifies the behavioral changes resulting from teaching effectiveness by measuring students' ability to translate learning into practical actions. The outcome layer reflects the course's impact on shaping students' long-term career paths. The four layers of the Kirkpatrick Model reveal the stepwise effectiveness of immersive courses: high satisfaction(reaction layer)drives knowledge acquisition(learning layer), facilitates behavioral change(behavior layer), and ultimately leads to career outcomes(outcome layer).

This reseach employs the Kirkpatrick Model as its core framework to evaluate the effectiveness of the Project Management research program. Leveraging Hong Kong region' s unique position as a pivotal hub within the Guangdong-Hong Kong-Macao Greater Bay Area, it capitalizes on its international perspective, robust legal framework, and extensive project management expertise. This enables students to engage in field visits to enterprises, interact with industry experts, and gain firsthand experience with cutting-edge project management methodologies. The evaluation focuses on how key activities—including corporate visits, masterclasses, and cultural experiences—impact outcomes across multiple levels. The Kirkpatrick Model comprises four tiers: Reaction, Learning, Behavior, and Results. This systematic framework comprehensively measures the program's effectiveness, spanning short-term satisfaction to long-term behavioral change and organizational impact. It aims to establish a scientific evaluation indicator system for educational travel outcomes, assisting universities in standardizing and formalizing evaluation processes, enhancing program quality and effectiveness, and advancing distinctive curriculum development.

## 2 THEORETICAL BACKGROUND

The Kirkpatrick Model, proposed by Donald Kirkpatrick in 1959, was initially developed for corporate training evaluation and later expanded into educational settings (such as teacher development programs and student training), becoming one of the most widely used evaluation frameworks globally[1]. The model encompasses four levels—Reaction, Learning, Behavior, and Results—offering comprehensive assessment capabilities. It holistically considers learning behaviors, psychological performance, and learning outcomes, embodying both formative and summative evaluation approaches[2]. Praslova focused on the application of the Kirkpatrick model in higher education, particularly in learning outcomes and program evaluation[3]. This model enables a comprehensive, multi-level assessment of training effectiveness across dimensions including learner response, knowledge acquisition, behavioral change, and organizational benefits[4].

Educational travel serve as both a vital component of comprehensive practical activity courses and an effective pathway for holistic education[5]. Currently, on-site study activities focused on intangible cultural heritage are gaining popularity across universities, with course modules gradually maturing[6]. Dou, Xueting Katherine, et al.(2023)argue that educational institutions and tourism service providers should collaborate to design more immersive, culturally rich short-term travel programs to optimize affective learning outcomes[7]. Currently, education travel are increasingly common in project management curricula, yet they vary widely in format and lack standardization. For instance, quantifying learning outcomes poses challenges, as traditional exams struggle to measure practical skills, necessitating multidimensional assessments incorporating frameworks like the Kirkpatrick Model. Educational travel serves as a vital channel for the nation to comprehensively advance quality education and promote scientific literacy. However, the development of an evaluation system capable of fostering high-quality growth in educational travel has received insufficient attention and lacks innovative perspectives[8]. While the Kirkpatrick Model is widely used, its application to evaluate the differential impact of specific activities within a short-term study tour remains underexplored.

## 3 RESEARCH DESIGN AND RESEARCH METHODS

This reseach employs the questionnaire method as its data collection approach, with the questionnaire design grounded in the Kirkpatrick Model as its theoretical framework. The program content primarily encompasses three aspects: corporate visits will guide students in conducting field investigations of local enterprises and project management processes; master lectures will arrange in-depth discussions between students and industry project management professionals to gain practical experience; cultural experiences will integrate Hong Kong region' s international characteristics, enabling students to immerse themselves in the local cultural atmosphere and developmental dynamics beyond academic practice. The Kirkpatrick Model comprises four progressive levels: Reaction, Learning, Behavior, and Results. Questionnaires were distributed to students at different stages following the educational travel, enabling a systematic and comprehensive evaluation of the program's overall effectiveness—from short-term experiences to long-term impacts.

The questionnaire structure strictly follows the hierarchical design of the Kirkpatrick Model, comprising 20 scale items and 2 open-ended questions. This reseach employs a 5-point Likert scale. The total score/mean for each level represents the arithmetic mean of all items within that level, while the overall effect mean is the average of all 20 items. The Reaction Level (Items 1-5) measures students' immediate satisfaction with the overall trip experience, course content, and logistical support. Cronbach's α for this section was 0.877. The Learning Layer (Items 6-10) assesses students' mastery and understanding of project management knowledge, skills, and cutting-edge concepts. Cronbach's α for this section was 0.906. The Behavioral Layer (Items 11-15) examines students' willingness and plans to apply their learning to subsequent studies, practical work, and career development. This section's Cronbach's α is 0.932. Outcome Layer (Items 16-20): Measures the potential or anticipated impact of the research experience on students' personal competitiveness, career identity, and perception of the Greater Bay Area's development prospects. This section's Cronbach's α is 0.926. All layer α coefficients exceed 0.7, indicating reasonable layer classification and strong internal item consistency.

The Pearson correlation coefficient matrix between each pair of the four levels reveals the strength of relationships among them. Correlation coefficients between all pairs of levels ranged from 0.831 to 0.906, all significant at $p < .001$. The four levels collectively point to a higher-order, unified construct of “training effectiveness.” Within this research context, the levels of the training program demonstrate strong synergy and progression, fully validating the model's effectiveness, see Table 1.

**Table 1** Correlation Coefficients

| Variable | LEVEL1 | LEVEL2 | LEVEL3 | LEVEL4 |
|---|---|---|---|---|
| LEVEL1 | 1 | | | |
| LEVEL2 | .855** | 1 | | |
| LEVEL3 | .889** | .906** | 1 | |
| LEVEL4 | .831** | .881** | .891** | 1 |

## 4 ANALYSIS OF THE QUESTIONNAIRE SURVEY RESULTS

### 4.1 Reaction Layer

The Reaction Layer primarily reflects students' immediate satisfaction with the program itinerary, content design, and logistical support. Analysis shows this layer's mean score is 4.52 (out of 5), indicating overall high student satisfaction. Particularly positive feedback was received regarding itinerary arrangements, corporate visit content, and masterclass design. However, transportation connectivity issues (35% of open-ended responses) significantly impacted some students' experience: the group complaining about transportation had a significantly lower Reaction layer mean (4.21) compared to the non-complaining group (4.68, $p<0.01$), highlighting how logistical execution details critically influence immediate satisfaction.

### 4.2 Learning Layer

The Learning dimension assessed students' gains in knowledge, skills, and concepts, yielding a mean score of 4.49, demonstrating high reliability and consistency. Corporate visits (e.g., Hong Kong Region Science Park, Cyberport) were particularly effective for knowledge absorption: the group of students who found corporate visits most valuable scored significantly higher in the Learning dimension (4.71) than the cultural experience group (4.32, $p<0.05$). This indicates that visits to technology enterprises effectively enhanced students' understanding of professional knowledge such as project management frameworks, technology transfer, and innovative technology applications, facilitating a shift from “passive lectures” to “active inquiry.”

### 4.3 Behavioral Layer

The behavioral level focuses on students' willingness and plans to translate learning into practice, with an average score of 4.12. Students generally demonstrated strong intentions to apply project management strategies to coursework, team collaboration, and career planning. However, scores at this level were slightly lower than those in the Reaction and Learning Layers, consistent with the Kirkpatrick Model's observation that behavioral transformation requires time to solidify. Correlation analysis revealed that while the path strength from the Learning Layer to the Behavior Layer ($r=0.883$) was significant, it still indicates a need to strengthen guidance mechanisms for knowledge-to-practice transfer.

### 4.4 Results Layer

The Results layer measures the program's impact on students' long-term competitiveness, career identity, and development prospects, with an average score of 3.83. Enterprise visit activities significantly enhanced this layer (Enterprise Visit group mean 4.18 vs. Cultural Experience group 3.71, $p<0.05$), indicating that innovation case studies from science parks and enterprises helped students rethink career paths and boost confidence in their competitiveness for Greater Bay Area employment. Nevertheless, the relatively low scores at this level reflect the limitations of short-term study programs in achieving profound impacts. Fully realizing outcomes requires long-term tracking and sustained intervention.

### 4.5 Results of Mean Difference Test

Students complaining about transportation issues ($n=45$) scored significantly lower than the non-complaining group on the response dimension mean (4.21 vs. 4.68, $p<0.01$) and item*5 (logistical support, 3.92 vs. 4.81, $p<0.01$); Students who rated “corporate visits” (e.g., Cyberport) as most valuable ($n=32$) scored significantly higher on the learning dimension (4.71 vs. 4.32, $p<0.05$) and outcome dimension (4.18 vs. 3.71, $p<0.05$) than those in the “cultural experience” group ($n=36$, e.g., the Forbidden City), confirming that corporate visits exert a more pronounced effect on knowledge absorption and long-term impact.

## 5 CONCLUSION AND DISCUSSION

This project achieved strong overall effectiveness within the Kirkpatrick Model framework), with exceptional performance at the Reaction and Learning levels. While the Behavior and Results levels showed room for improvement, they still reached positive levels, aligning with the expected lag in Results-level impact for short-term study programs. Scores at higher levels (Behavior, Results) were relatively lower, consistent with Kirkpatrick Model theory—deeper transformation requires more time to solidify. Correlation analysis indicates diminishing path strength from the learning layer to the behavioral layer and from the behavioral layer to the outcome layer, suggesting future emphasis on strengthening guidance mechanisms for knowledge-to-practice conversion.

This reseach confirms the effectiveness of blended education travel design (corporate visits + cultural experiences + masterclasses) in cultivating multidimensional competencies; quantifies the differentiated value of various activity types, providing data support for subsequent project prioritization (e.g., intensifying corporate visits, optimizing lecture design); simultaneously revealing the decisive impact of execution details (e.g., transportation, scheduling) on overall success. For instance, logistical support (particularly transportation) critically influences reaction-level satisfaction ($p<0.01$), reaffirming the pivotal role of meticulous execution in experience quality. Lecture arrangements (duration, timing) significantly affect learning engagement, necessitating optimized design to enhance knowledge absorption efficiency.

This reseach validates the applicability of the Kirkpatrick Model in evaluating education travel, aligning with existing research findings (e.g., high scores in the reaction layer). Theoretically, this research extends the empirical application of the Kirkpatrick model to short-term study programs, particularly in business education, validating its hierarchical progression

logic within cross-cultural practice settings. Practically, the significant promotion of in-depth outcomes through corporate visits provides new empirical support for designing project management education travel, breaking through previous limitations that focused solely on satisfaction or knowledge acquisition.

## COMPETING INTERESTS

The authors have no relevant financial or non-financial interests to disclose.

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