

A Factorial Validation of Internship Perception Structure: Second-Order Confirmatory Factor Analysis

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ABSTRACT

The main purpose of this study was to build and to validate an instrument to measure internship perception among hospitality students in Taiwan. The sample for this study consisted of 236 hospitality students studying at various universities in Taiwan. Confirmatory factor analysis results supported the four dimensional structure of internship perception separating the role of the internship experience; role of the internship agency; intern abilities; and factors in selecting an internship in the current student sample. Results also provided initial evidence for the construct validity, criterion validity and internal consistency of the subscales of internship perception scale.

Keywords: Internship, Perception, Confirmatory Factor Analysis

INTRODUCTION

Higher education internships, placements and practicum are a variety of terms for what is, essentially, a period of employment in the tourism and hospitality industry. Other terms used are work experience and cooperative education (Busby, 2003; Inui, Wheeler & Lankford, 2006; Leslie & Richardson, 2000; Waryszak, 1997 cited in Busby & Gibson, 2010). Today, schools that provide tourism and hospitality courses highlight the importance of practical training, and make efforts to develop internship programs for students. Busby and Fiedel (2001) confirmed that in the United Kingdom, tourism undergraduate provision has been developing against a background of steady growth in the service sector, a significant increase in the recognition and the importance of tourism, and the appreciation that a vocationally trained workforce is a key element in maintaining competitive advantage. Hospitality internships provide an experience opportunity and to approach landscaper that is said to benefit all concerned – the students, industry and the college. For student, they can experience the first hand, professional practice activities which relate professional knowledge and skill. For industry, the benefit was can find the applicable employee and solved the staff shortage problem. For college, internship can provide more combines theoretical and practical courses to student. Lam and Ching (2007) suggest that “internship can be considered as one of the positive strategies for the schools to compete for a larger intake of students by promoting a comprehensive curriculum with an attractive internship program”. In conclusion, internship is a powerful teaching and learning tool to all related sectors.

In particular, Taiwan has become a service-based industry. Reflection on some of these will make clear that there are large numbers of hospitality industries in Taiwan. The department of hospitality management of universities has grown rapidly in Taiwan and has become one of the major faculties in Taiwan’s tertiary education. Arise from most students choose the department of hospitality management as the university education rising proportion. To understand the course characteristics also become the

more and more important in hospitality education. For the hospitality student, the main purpose of internship system planning was a way to combine the theoretical knowledge and professional skills into practical application. In the internship process, the student can realize that the learning knowledge from college whether applied in the workplace or not, he/she can gain expertise in the novice field. At the same time, a student can learn how to establish interpersonal relationships either with customers or colleagues. Internship project components as well aim to provide students with real world working experiences through their internships but also to enhance professional skill development by practice operation in the workplace. More importantly, an internship gives student the chance to test occupation possibilities in a realistic and “real world” environment and to examine a possible fit with a particular workplace.

The present research was to develop a suitable internship perception scale for a hospitality management student. Used the second-order confirmatory factor analysis to measure the scale’s validity and reliability and finally, the scale can measure the student’s internship perception.

LITERATURE REVIEW

Practical training course is the trend of the cooperative education in university, which also provides a solution of labor shortage for hospitality industry (Peng & Lin, 2009).The hospitality industry emphasizes practical experience. In order to assist students in entering their future careers, the curriculum design of hospitality education include industry internship credits in addition to hospitality relevant theory. Students combine the theory and practical experience, and make preparation for the job ahead of time (Lee & Chao, 2008).

Busby (2002) identified what the aims are students should to undertaking an internship:

- to experience employment and, where appropriate, accept responsibility for the completion of tasks and the supervision of others
- to obtain an insight into management and management methods
- to gain greater maturity and self-confidence
- to be involved in the diagnosis and solution of problems
- to develop attitudes and standards appropriate to career aspirations

Knouse and Fontenot (2008) found that the internship is a beneficial activity overall, employability seems to be enhanced, and interns generally experience both work-related and organizational learning. On the contrary, it has been criticized for the hospitality industry. Walmsley (2004) summarised eight characteristics of tourism occupations based on previous research: low paid, low skilled, related to a negative image to the extent of being "Mickey Mouse jobs in a candy- floss economy", exposed to poor management, part time, seasonal, a "refugee sector" and devoid of a clear career structure. The one of benefits of internship was be through the internship experience, students can review if they are suitable for this industry.

The value of internships is well documented in the hospitality research literature (Kok, 2000).Various studies outline the benefits of internship. For example, Waryszak (1999) agrees that employment know-how through internships helps in induction which ultimately increases the performance and retention of manpower. Fox (2001) regarded internship as an opportunity to close the yawning gap between college-learnt theory and practical reality. Mihail (2006) indicate that co-operative education can be used as a vehicle for linking theoretical knowledge and practice, and enhancing student employability upon graduation. Lam and Ching’s (2007) findings indicated that students had high expectations of broadening work experience, developing technical skills, and acquiring good

opportunities for future career development in the same company. On the other hand, students' perceptions were high for enlarging work experience, being able to develop technical skill, and interesting and challenging work. For a hotel graduate, hospitality internship acts as an association between university education and industry expectations (Anjana & Kirti, 2010).

Based on the findings in the previous studies, internship is closely related to hospitality education while on the other hand, it is vital to the graduates' intention of joining the hospitality industry. The topic of how students expectation and perception their internship program has become a worthy issue of study. Given the poverty of research in this area in Taiwan, an exploratory research was conducted in this study. Internship perception constructs was measured in this study.

METHODS

Participants

In the present research, the sample consisted of hospitality undergraduates. A 78.67% response rate was achieved from the 236 surveys distributed to students. The student sample consisted of 236 students from two universities across the Taiwan who was in their academic year (104 males and 132 females). The sample student contains "complete internship programme (N=119)" and "no complete internship programme (N=117)" two partly.

Survey and Procedure

All 236 participants completed each of the five different measures for this study. Questionnaires were used to collect information on demographics, internship role, internship agency role, intern abilities, and selecting factor.

Demographic Questionnaire. A demographic inventory was used to gather information about age, gender, and internship experience.

The Internship Perception Scale. This study adopted Beggs, Ross and Goodwin's (2008) scale for measuring student's internship perception. The measure assesses internship perception in four subscales: (1) the role of the internship experience; (2) role of the internship agency; (3) intern abilities; and (4) factors in selecting an internship. Each item was assessed on a five-point Likert-type scale ranging from "strongly disagree" to "strongly agree" and the higher numbers indicates increasing use of related internship perception. Beggs et al., research sample consisted of practitioners in the travel and tourism industry and undergraduate students majoring in travel and tourism. The practitioner sample consisted of 123 practitioners who were randomly selected from the Resort and Commercial Recreation Association. Cronbach's alpha was 0.91, indicating strong test reliability for the instrument as a whole. Cronbach's alpha was 0.92 for section one; 0.91 for section two; 0.93 for section three; and 0.90 for section four. These measures indicated strong test reliability for each section of the instrument. The meanings of various variables, symbol and model of confirmatory factor analyses has below from Table 1.

Table 1: Internship perception questionnaire of the variable

first-order latent variables	observed dependent variable
The role of the internship experience (η_1)	Develop problem solving skills
	Develop communication skills
	Develop human relation skills
The role of the internship agency(η_2)	Orientation and training
	Opportunities for professional development

Intern Abilities (η_3)	Interns do a good job taking initiative Interns are highly motivated
factors in selecting an internship (η_4)	Interns do a good job taking direction Based on career aspirations Based on quality of agency programmes & staff

Data Analysis

According to the purpose of the study, author shall undertake on the following three statistical methods:

- (1) the degree of momentum and peak data for descriptive statistics on the processing, in order to present some basic properties of materials-which materials, testing the available information whether the basic assumptions, using the selection estimation method.
- (2) With LISREL 8.54 version statistical software to conduct confirmatory factor analysis to verify the internship perception questionnaire fit model assumptions. Huang (2004) indicated Jöreskog and Sörbom (1989) have suggested, indicators of absolute fit: include Chi-Square (χ^2), Root Mean Square Error of Approximation (SRMR), Goodness of Fit Index (GFI); Relative Fit Index: Comparative Fit Index (CFI), Non-Normed Fit Index (NNFI); Parsimonious Normed Fit Index: parsimonious goodness-of-fit index (PNFI), Critical N (CN) and Chi-Square with Degrees of Freedom (χ^2/df), to evaluate the overall degree of fit.
- (3) Finally, to construct the internal structure of model fit, the reliability evaluation, convergent validity and discriminant validity of such evaluation.

RESULTS

Confirmatory Factor Analyses of the Internship Perception Scale Items

This section describes the internship perception questionnaire scale analysis of the order of (1) basic data view; (2) Questionnaire's external quality assessment; (3) Questionnaire's internal quality evaluation.

(1) Basic data view

LISREL statistical analysis carried out in the past, fulfills the need to fully understand the characteristics of data to ensure compliance with SEM assumptions, which should avoid affecting the mode of estimation and test results. Huang (2002) pointed out that if the trend variable shall be assigned the absolute value of greater than 3, it is considered extreme skewness and kurtosis absolute value greater than 10 were both considered to be a problem. Therefore, the distribution of these problems will affect the ML (maximum likelihood) and GLS (general least square) estimation. If the variables will be allocate within the above criteria. We can use one of the estimation methods to estimate.

As seen in Table 2, among hospitality management students in 10 internship perception trend from the observed variable and kurtosis and skewness, the observed variables can be found in the skewness and kurtosis values are not large, in order to estimate should use the ML method.

Table 2: Internship perception scale model all the observed variables of skewness and kurtosis of the distribution

observed variables	skewness	kurtosis	observed variables	skewness	kurtosis
X1	-1.46	5.42	X6	-.74	2.12
X2	-1.17	2.77	X7	-.93	2.41
X3	-1.09	2.65	X8	-.70	1.74

X4	-1.44	3.88	X9	-1.13	2.75
X5	-1.31	4.63	X10	-0.48	-1.13

(2) Questionnaire's external quality assessment

External quality evaluation model consists of three tests, first of these is the offending estimates. The second type is the degree of overall fit test. The third type is the validity of individual variables test, and the test project for the standardization of parameters is significant.

(a) Offending estimates

Before proposing a model, one must examine whether the production violated estimates, the general assessment has often occurred in violation of the following three phenomena: 1. Have a negative variance of error in any meaningful construction of error variation. 2. Standardized coefficients exceeding or very close to 1. 3. There is too much standard error (Huang, 2002). Figure 1 presents the standardized regression coefficient values range from 0.14 to 0.93, with most garnered less too close to 1 (usually 0.95 as the threshold), the observed variables measuring error of the value from 0.01 to 0.08, indicating measurement error is not great. In addition, this measurement mode illustrates that the t-values of all variables were significantly greater higher than 1.96. With the above results show the phenomenon was not serious irregularities in the estimates. It is for this reason that Continue evaluate the overall model fit.

(b) Degree of overall fit test

The results of the initial estimation of the factor model showed: $\chi^2(31) = 128.63$, $P = 0.00$, has significant level, that this hypothesis model of variables and empirical data covariance matrix difference between. As the model was rejected, but vulnerable to large sample chi-square value of the number of influences, there is a need to make reference to other indicators to judge the overall goodness of fit. The GFI value was of 0.90, greater than the accepted value of 0.90, indicating acceptable model assumptions. RMSEA = 0.12, this model has poor standard fit. SRMR = 0.048 less than the accepted value of 0.05, indicating that this model is accepted. The relative indicators NNFI = 0.95, much higher than accepted values of 0.90, also shows this pattern quite acceptable. CFI = 0.96, also much higher than accepted values of 0.90, then the display mode is also quite acceptable. Parsimonious Normed Fit Index, PNFI = 0.66 greater than the accepted value of 0.5, indicating that this model is acceptable. Critical N CN = 93.03, less than 200, the display mode is not acceptable. Normed chi-square = 4.149, less than 5.0, that model is acceptable. Through LISREL 8.54 version of the statistical estimates for each of the parameters and indicators, shown in Figure 1.

Overall, the results show that this model is quite acceptable, in other words, this is a fairly consistent pattern of a model empirical data. Therefore, the measurement mode has overall construct validity.

(3) Validity of individual variables test

When pass the external quality assessment than can validity of individual variables test, including reliability, convergent validity, and discriminant validity.

(a) Reliability

Table 3 presents the 10 observed variables are consistent with the reliability, Jöreskog and Sörbom (1989) proposed that the value must be greater than 0.20. Four latent factors in the construct reliability value are between 0.77-0.91, and it is recommended to achieve more than the 0.6 standard, the overall construct reliability value is 0.97.

(b) Convergent validity

Table 3 and Figure 2 by the learned, all the observed variables corresponding to the alignment of potential factors of individual factor loading of its value, are statistically significant, the value of factor loading between 0.71 to 0.93 between All the observed variables are above the threshold to 0.45 (Huang, 2002). The most of observed variables can reflect its potential for construction. In the first stage of the four latent factors ranging from 0.63 to 0.78 among most of them reached the threshold of 0.50. These results suggested that this structure model has convergent validity.

(c) Discriminant validity

Table 4 shows the dual variables related to the estimated value of the fixed and free values of chi-square difference between estimated value, and the related confidence interval values. Huang (2007) mentioned, Jöreskog and Sörbom (1993) in "LISREL8: Structural Equation Modeling with SIMPLIS Command Language", the potential may test potential factor in the same way, that it is related to discriminant validity degree (discriminant validity) problem, which is used to form the true standard error of the approximate true-related approximate confidence interval, 95% confidence level, calculated as $r \pm 1.96$ standard error. The table 6 is all the chi-square and that has significance. That among variables related set to 1.00, and all related free estimate mode were differences between the models, in other words, these three set the pattern correlation is 1.00 and the related free estimated mode is not considered to be reciprocal, so that the correlation between latent variables can be discriminant. So this analysis showed that discriminant validity was supported. The above results show that internship perception questionnaire the observed variables and latent variables in terms of credibility in the reliability standards are achieved more than the value that has a good reliability. In the convergent validity, it showed that all observed variables and latent variables in the factor loadings and average variance extracted the performance to reach more than standard value that has good convergent validity. The final evaluation results also show that the scale of the potential variables may be related to differences with discriminant validity. Discriminant validity of the final evaluation results also shows that the questionnaire of the latent variables has discriminant validity.

Figure 1: Internship perception questionnaire confirmatory factor analysis of standardized parameter estimates

Table 3: Reliability and average variance of internship perception questionnaire

variance	R ²	construct reliability		average variance extracted	
Internship perception		reliability		first-order average variance extracted	second-order reliability average variance extracted
Internship Experience		0.91	0.97	0.77	0.90
X1	0.69				
X2	0.86				
X3	0.76				
Internship agency		0.88		0.78	
X4	0.76				
X5	0.81				
Intern ability		0.90		0.75	
X6	0.74				

Table 3: Reliability and average variance of internship perception questionnaire (continued)

variance	R ²	construct reliability		average variance extracted	
X7	0.83				
X8	0.71				
Selecting an internship		0.77		0.63	
X9	0.86				
X10	0.50				

Table 4: Relative and discriminant validity of internship perception questionnaire

latent variables	Internship experience	Internship agency	Intern abilities
	0.74 (73.73*) [.54, .74]		
Internship agency	0.64 (167.66*) [.44, .64]	0.67 (86.21*) [.47, .67]	
Intern abilities	0.68 (84.67*) [.44, .68]	0.83 (67.67*) [.63, .83]	0.84 (60.04*) [.64, .84]
Selecting an internship			

DISCUSSION

Conclusion

The importance of internship perception has been recorded in the literature. And it is used as an affect index of an individual's behavior attitude and career development. However, only few studies in the hospitality literature have examined the basic structure of the internship perception domain. The purpose of this study was to identify the internship perception structure of hospitality students. To understand the student's internship perception was very important. If the industry or school understands what hospitality student's perception the most in internship, the industry or school can then develop effective draft strategies as well as useful employee retention programs.

Data were collected from 236 university hospitality students enrolled in hospitality programs in Taiwan. CFA were conducted to explore and confirm students' internship perception structure. The results of CFA confirmed the presence of a second-order factor structure of internship perception.

This article tested a series of factor structures of the internship perception based on a sample of Taiwan undergraduate hospitality management students. Three alternative methods were specified and tested. The standardized factor loadings were all positive and statistically significant, ranging from 0.71 to 0.93. Each of the four subscales demonstrated high levels of internal consistency ranging from 0.63 to 0.78.

All the internship perception can be represented by four primary factors: the role of the internship experience; role of the internship agency; intern abilities; and factors in selecting an internship. The results of CFA grouped 10 internship perception dimensions into four distinct factors. Among them the role of the internship experience factor represents internship perception like problem solving skills, communication skills and human relation skills. Two internship perceptions were grouped into the factor of "the role of the internship agency." They were orientation and training and opportunities for professional development. Among them the intern abilities factor represents internship perception like do a good job taking initiative and highly motivated. Two internship perceptions were grouped into the factor of "the factors in selecting an internship." They were career aspirations and quality of agency programmes & staff.

This study shows that hospitality students' internship perception centered on "factors in selecting an internship" ($\gamma = .88$), which indicates that hospitality students perception the internship aspects that career aspirations and quality of agency programmes & staff is the most important. The "role of the internship agency" was the second contributor among hospitality students' internship perceptions ($\gamma = .82$). They are slightly less concerned about the "intern ability" of internship such as interns are highly motivated. The factor "the role of the internship experience" was the lowest contributor among hospitality

students' internship perception ($\gamma = .71$). Overall, four subscales has good explanatory power. Results also provided initial evidence for the construct validity, internal consistency, and criterion-related validity of the internship perception scale. However, considering that the offered correlations for construct and criterion-related validity were not supported fully, it is essential to further replicate in different context to ensure consistency. Overall, research findings support that internship perception should be considered as a multidimensional construct. A major reason, a major reason for the confusion or contradictory conclusion about the internship perception's consequences (e.g., burnout, and internship satisfaction) could be a result of studies that have not considered the role of internship.

Hornig (2003) proposed that strategic cooperation among teachers, researchers, schools, industries and nations in order to facilitate hospitality curriculum planning in the schools and create a better learning environment, one with the resources and flexibility to develop students' international perspectives and professional capabilities. The one of way is internship programming. Therefore, planning well internship program is necessary and important course system.

FUTURE RESEARCH

A limitation of the present study may be the generalizability of the findings. Specifically, the limitation is that the sample used was self-selected from a single institution and may not accurately represent internship perception in a representative college sample. It is also important to compare hospitality students' internship perception with those of students in other majors (e.g., tourism, leisure student) for future researchers. A study on the similarities and differences in internship perception among students with different majors will help hospitality educators to understand which internship demands are unique among hospitality students. This can help hospitality educators to develop practical internship programs so that they can better counseling students on career planning. And the same time, it can enable hospitality practitioners to planning the internship training so that they can reduce the training costs and improving job satisfaction for intern.

It can be suggested that the future researcher can adopt qualitative approaches to help clarify students' internship perceptions of the items. Although this study focused on students' perceptions of internship items, future studies can focus on measuring practitioners' perceptions of their importance. In this way, it can be compared to that of the students and the points of difference highlighted by the practitioner can be understood and solutions can be proposed. Make sure that the cognitive balance with student and practitioner can help promote the internship effects.

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