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## Academic papers

# How to establish a creative atmosphere in tourism and hospitality education in the context of China

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## ABSTRACT

The aim of the paper is to develop an analytical framework for understanding and measuring how educators' professional competencies influence the process of establishing a creative atmosphere within the tourism and hospitality education context of China. Six hypotheses are developed and tested among a survey sample of 771 tourism and hospitality students from four universities. Our research findings support the mediating effects of theatrical enhancement and empirical learning, indicating that these two factors positively affect the relationship between educator competency and the development of a creative atmosphere.

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## 1. Introduction

The introduction of creativity concepts into school education is emerging because it is a determinant of student's future competitive advantage in the dynamic employment market (Chien & Hui, 2010; Craft, 2010). By introducing new creativity concepts, universities may present empirical learning with hands-on experiences, such as field trips or site visits (Kim, Lee, Youn, Eom, & Lee, 2015), and encourage students' intrinsic motivation to solve problem in a creative or novel manner (Inui, Wheeler, & Lankford, 2006). A key premise in the tourism and hospitality literature on creativity concepts is that the development of the creative environment is a function of encouraging an individual's self-awareness of their motivation, imagination and creativity (Morgan, 2004). Mayfield and Mayfield (2010) divided the research on creative environment perceptions into several streams or approaches. First, there are studies that center on how a creative environment is based on awareness regarding an individual's competition, training, and instruction. This effort's focus has been more on the internal attributes of investigating an individual's perceptions of an environment's atmosphere than on measuring objective climate attributes, such as the perception of support for the development of creative abilities (Peterson, 2001). The second stream has a more external orientation and emphasizes empirical learning from management practices, product development, resource allocation and novel idea creation to fit both the present and future customer needs (Davies et al., 2013).

There is an important symbiosis between these streams for future education course design. For example, foundational theoretical pools of integrated existing knowledge from the literature can be enriched into new thinking or know-how by using knowledge from basic theory to develop new ideas to solve problems. In addition, this new thinking or ideas must lead to the development of new services to provide value for changing needs (Paulsson & Sundin, 2000). Thus, theoretical

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education influences the extent to which new thinking is created, and the new ideas that are formed are transformed into new methods or new services to solve existing problems and meet customer requirements. Further, Lau (2012) suggested that creating environmental and learning from real cases or empirical experience stimulation to facilitate students' creative thinking may change students' behavior and social-cognitive beliefs, such as attitudes. Furthermore, in examining those relations, course designers' professional competency plays a critical role because the competency not only helps develop students' internal and external motivation to pursue new techniques and skills but also encourages students' learning outside the classroom (Sawyer, 2011). This research examined the relation between professional competency and both theoretical enhancement and empirical learning mechanisms and how these mechanisms influence and can be influenced to develop a creative atmosphere.

We pursued three unsolved research questions in tourism and hospitality education: (1) how does the professional competency of teachers impact theoretical enhancement and empirical learning, (2) how does the theoretical enhancement and empirical learning affect the success of the development of a creative atmosphere, and (3) how does professional competency influence the creative atmosphere through theoretical enhancement and empirical learning? To investigate and identify critical attributes for education, we focused on the professional competency held by the course designers and on the delivery creativity and entrepreneurship concepts for students participating in knowledge or skills training. The experience and theory are accessible, and guidance is provided through the appropriate design of a theoretical and empirical learning climate. Examining the creative atmosphere, we emphasize the tourism and hospitality students' real feedback to identify important constructs of the learning process (Lin & Wong, 2014; Peterson, 2001).

## 2. Literature review and hypothesis development

### 2.1. The effects of professional competency on theoretical enhancement and empirical learning

Professional competency refers to the invisible knowledge and skills that reside in the mind, which reflects the self-regulation and self-control capabilities that are required to perform tasks successfully (Agut, Grau, & Peiro, 2003). From the competency-based perspective in the education field, well-trained course designers are considered a primary and valuable repository; this reflects an individual's capacity to act, which can encourage students' motivation to learn and absorb new knowledge, practice new technical skills and maintain competitive advantages with others (Crosbie et al., 2002). In the theoretical learning process, a teacher who is familiar with expertise and professional knowledge may be better able to manage heterogeneous theory, integrate different concepts, execute reactive course adjustments and, thus, be better able to effectively execute related theoretical transfers (Apostolopoulos, Leivadi & Yiannakis, 2013; Paulsson & Sundin, 2000). Therefore, we argue that educators need to strengthen their professional competency if they want to develop and enhance students' theoretical foundations and applications during the knowledge transfer period in the classroom.

Professional competency also consists of specific areas of expertise such as marketing analysis, financial and accounting, customer service and behaviors. Course designers or educators with technical knowledge and skills that enable them to increase their ability to guide students focus on system thinking and applications that fit the industry and the changing customer needs (Sánchez, 2013). Further, the prior industrial experience, skills and service that educators may possess are likely to increase their ability to communicate and interact with students, foster empirical knowledge and provide more information for future employment (Cantwell & Scevak, 2004). Consequently, educators with more experience and higher levels of professional competences may lead or direct students toward creative thinking and guide them as they analyze complex problems in classrooms (Dewey, 2007). Thus, it is arguable that educators with industrial experience are most conspicuous and have systematic concepts to equip students with the skills required to manage people and organizations. Accordingly, professional competency in the form of knowledge and skills embedded in the educator is expected to provide positive contributions to empirical learning for the students.

**Hypothesis 1.** The greater professional competence a teacher has, the more likely this is positively associated with theoretical enhancement.

**Hypothesis 2.** The greater professional competence a teacher has, the more likely this is positively associated with empirical learning.

### 2.2. The effects of theoretical enhancement and empirical learning on creative atmosphere

Theoretical enhancement emphasizes practical application rather than solely addressing the theoretical in prior literature (Street, Gold, & Manning, 2013). The theoretical enhancement process is referenced by Brown and Stitzman (2011) for more extensive discussions regarding the relations between learning theories and new skill development. Within the social learning literature, theorists postulate that skills and new idea generation advance along a continuum that ranges from the early stages of accumulating task-specific knowledge from literature and integrating that knowledge into individual knowledge stocks, to the later stages in which existing knowledge is transformed into mental schemas that support new skilled development activity (Mezirow & Taylor, 2011). Göranson and Josefson (2012) suggested that theoretical knowledge

is required to design new products and service, solve task problems and apply to the generation of new ideas. Litchfield, Ford, and Gentry (2014), in their creative environment study of organizational innovation, stated that a creative environment is created when organizational members are willing to encourage each other to attempt new tasks, attempt creative solutions to solve difficult problems, and welcome change in the current situation. One recent study examined the theoretical-atmosphere implementation link in organizations and found that creative atmospheres are developed solely in the presence of strong theoretical knowledge of individuals who have received high innovation climate support from the organization (Choi, Tran, & Park, 2015). Thus, theoretical knowledge and enhancement is the necessary ingredient for the successful development of a creative environment.

In addition, empirical learning may facilitate student's industrial knowledge because students will not only develop collaborative behavior while accomplishing group tasks but will also increase their capability of learning complex skills (Varela, Burke & Michel, 2013). The creative atmosphere development depends on the extent of individual or group collaborative behaviors, including the willingness to exchange new information, improve colleague relationships; such development also depends on the students' perception of mutual support for creativity and innovation (Mayfield & Mayfield, 2010). Group members' mutual support and collaborative behaviors will stimulate close and repeated interaction and then create a creative atmosphere. In other words, empirical learning may facilitate students' knowledge regarding the industrial trends and importance of collaboration in solving a new task problem, which may improve all aspects of the creative atmosphere perception and maximize their creativity. In such a case, empirical learning would be a critical attribute to the development of an attractive environment and creative atmosphere. Therefore, although the process of developing a creative environment may potentially involve many variables, a creative atmosphere appears to have garnered both theoretical and empirical support as a possible mechanism (Litchfield et al., 2014). Based on this prior research, we propose the following hypotheses:

**Hypothesis 3.** Theatrical enhancement is more likely positively associated with creative atmosphere development.

**Hypothesis 4.** Empirical learning is more likely positively associated with creative atmosphere development.

### 2.3. The mediating roles of theoretical enhancement and empirical learning

The earlier hypotheses link the relations among professional competency and creative atmosphere with theoretical enhancement and empirical learning. These hypotheses imply that professional competency will indirectly influence creative atmosphere development through theoretical enhancement and empirical learning in the classroom. From the competency-based perspective, an educator who has unique capabilities, knowledge, and expertise to exert effective efforts in the course design will inspire student's new thinking and change their behavior (Hadzigeorgiou, Fokialis, & Kabour-opoulou, 2012; Harris, Hobart, & Lundberg, 1995). Creative atmosphere development is a process that requires not only an educator's effort and experience but also the devotion of much time, attention, and effort in communication with the students.

The education course design requires educators to design appropriate courses that include theoretical and empirical concepts regarding the delivery of industry requirements and market trends, as such information enhances students' future career opportunities and problem identification skills (Mansor et al., 2015). From the perspective of creative education, the learning climate of the school significantly influences student creativity, and thus, to effectively enhance student creativity, it is the responsibility of the educator to modify the course content and the delivery system (Niu & Kaufman, 2013). In an atmosphere that encourages creativity, theatrical enhancement and empirical learning act as a platform that allows the tourism and hospitality student to learn and connect with the real industry phenomena. Niu (2012) suggests that student learning in the traditional Chinese context did not consist only of nurturer and recipient, but that the environmental context was also a critical part of improving creative abilities. Chinese students prefer the co-learning process, which increases the importance of environmental development in education (Ma & Rapee, 2014). Accordingly, within the Chinese context, educators not only design an appropriate course that integrates the theoretical and empirical concepts, but they should also promote collaborative behaviors, close interactions, and mutual commitments, all of which facilitate student learning and the acquisition of new knowledge in the classroom (Shaheen, 2010). Accordingly, well-designed theoretical and empirical learning depends on educator's professional expertise; in addition, this will increase the willingness and involvement of both parties in conducting the information exchange and discussion activities and will thus lead to developing a creative atmosphere.

The earlier discussion suggests that professional competency affects the creative atmosphere development primarily through theoretical enhancement and empirical learning. That is, the professional competency of educators acts as a catalyst and foundation to encourage students' motivation in theoretical and empirical learning, which, in turn, enhances an attractive creative atmosphere. Thus, this study proposes that theoretical enhancement and empirical learning would play a mediating role in the relations between the independent variables of professional competency and the dependent variable of creative atmosphere. In accordance with this line of reasoning, the following hypotheses are proposed.

**Hypothesis 5.** The theatrical enhancement positively mediates the linkage of professional competence and creative atmosphere development.

**Hypothesis 6.** The empirical learning positively mediates the linkage of professional competence and creative atmosphere development.

### 3. Method

#### 3.1. Sampling

This research's hypotheses were tested based on tourism and hospitality student's perspective of the current education with course design. Using the student perspective provided a suitable direction setting for examining the education and measuring the creative atmosphere because this perspective reflects the reality of student responses and their hope for future courses and requirements for professional competence enhancement to develop a high-quality future education environment (Dale, 2007; Maher, 2004). In addition, the primary function of students in tourism and hospitality from different universities is a suitable index that considers various thoughts and feelings regarding current tourism and hospitality education. Furthermore, this index avoids the subjectivity associated with measuring the comment method bias from the same sources. A creative atmosphere provides an objective setting and is increasingly important for tourism and hospitality education because of the highly competitive global tourism market and the creativity requirement (Lin & Wong, 2014). The samples were drawn from four universities and six tourism and hospitality-related departments in the south of China. The departments represented in this study include the Department of Tourism Management; the Department of Hotel and Restaurant Management; the Department of Travel and Tourism Management; the Department of Hospitality and Management; and other tourism-related management departments.

To analyze the creative atmosphere, the study used information gathered from different levels of students that have studied tourism, hospitality, travel and a related expertize course. Several research assistants were hired to help collect data; the sample was collected from February to June 2015. Multiple stages were used in collecting data; first, the items were measured through a comprehensive literature review and discussed with several teaching colleagues who have experience in teaching tourism, hospitality, and travel management courses or have related research experience in the creation of the original questionnaire. Second, to obtain a better understanding of the content of the questionnaire, we distributed a pre-test questionnaire to tourism and hospitality students; this ensured that the questionnaires appropriately measured and were understood by students. Third, the final measured questionnaires were distributed in class, and the students were requested to complete the questionnaire; research assistants were responsible for answering unclear or other participant questions. Of the 1500 questionnaires distributed in the class, 1024 were returned. After discarding the useless questionnaires (those with multiple missing values, those with the same values through all measuring items or those that were

**Table 1**  
A summary of measuring variables for creative atmosphere.

Variable	Mean	S.D.	Alpha
<b>1. Creative atmosphere</b>			
• <b>Creative competition:</b> School organizational creative competition quantity and types of class.	5.374	1.286	.767
• <b>Creative association:</b> Number of association to conduct creative activities for tourism and hospitality students.	5.511	1.124	
• <b>Creative platform:</b> Provide students with creativity and entrepreneurship training and practice sites, opportunities.	5.977	1.020	
• <b>Creativity training:</b> Creativity and entrepreneurship for students participating in knowledge or skills training.	5.901	1.052	
• <b>Creativity financing:</b> Providing funding support for creativity projects or competition.	6.001	.978	
• <b>Creativity instruction:</b> Internal and external professional guidance to students of creativity and entrepreneurship.	5.981	.958	
• <b>Creativity incubation:</b> Schools provide incubation space or funding policy support for potential creative projects.	6.062	.992	
<b>2. Professional competence</b>			
• <b>Professionalism:</b> Familiar with expertize and professional knowledge	6.134	.979	.701
• <b>Creative ability:</b> Number of new thinking and solution for new problems.	5.975	.987	
• <b>Creative consciousness:</b> With new ideas and frequency of motivation.	5.970	1.027	
• <b>Practical experience:</b> Familiar with practicality and flexibility in solving new problems.	5.977	1.207	
<b>3. Theoretical enhancement</b>			
• <b>Courses enhancement:</b> Emphasize practical application rather than solely address the theoretical.	5.866	1.027	.721
• <b>Courses content:</b> Full of creativity, catch the world trend of tourism and hospitality, and systematic.	5.920	1.023	
• <b>Technology usage:</b> Integrated and application multimedia, video, internet into course.	5.678	1.011	
• <b>Creative guide:</b> Well-designed exercise of creative thinking or methods.	5.817	1.007	
• <b>Teaching method:</b> Using creative case scenario simulation and other methods in the tourism and hospitality industry.	5.848	1.038	
• <b>Classroom atmosphere:</b> Creating an attractive atmosphere in the classroom to stimulate student interest.	5.488	1.259	
• <b>Freedom of course selection:</b> The degree of course and teacher selection.	5.906	1.044	
<b>4. Empirical training</b>			
• <b>Empirical training:</b> Experiment practice and field study arrangements.	5.976	.999	.790
• <b>Training foundation:</b> The quantity and level of support of the campus training base	5.929	.979	
• <b>Training content:</b> Focusing on creativity and cases to expand the use of course content.	6.059	.952	
• <b>Training Process:</b> With a complete training process and regulatory requirements.	5.839	.963	
• <b>Theoretical guidance:</b> Teacher training guide focusing on system thinking and application.	5.980	.960	
• <b>Industry guide:</b> Invite industries' experienced teachers to assist in the training course.	6.057	.936	

otherwise unusable), 771 questionnaires were judged to be usable for further statistical analyses, yielding a 51.40% response rate.

### 3.2. Measuring

The main measure constructs of a creative atmosphere were grouped into the following four categories: (1) creative atmosphere, (2) professional competence, (3) theatrical enhancement, and (4) empirical learning. These competencies were assessed using the 24-item questionnaire and information from the literature on each category of competency: (1) creative atmosphere (Elisondo, Donolo & Rinaudo, 2013; Hadzigeorgiou et al., 2012; Shaheen, 2010), (2) professional competence (Horng, Hsu, Liu, Lin & Tsai, 2011; Mirzagitova & Akhmetov, 2015; Niyazova, Berkimbaev, Pralieva, Berdi & Bimaganbetova, 2013; Uzakbaeva, Baimukhanbetov, Berkimbaev, Mukhamedzhanov & Pralieva, 2013), (3) theatrical enhancement (Lee, 2005; Lucas, 2001; Pereira, Carneiro & Gonçalves, 2014; Weissblueth, Nissim & Amar, 2014), and (4) empirical learning (Assor, 2012; Ehlers, 2011; Kuh, 2008; Mugimu & Mugisha, 2013). For each set of measurement items (Table 1), students were requested to assess the degree to which they measured importance (1, “strongly unimportant,” 7, “strongly important”). Cronbach's alpha coefficient was computed to assess the internal consistency reliability of the measure; the results show that all values of Cronbach's alpha are above .7, which means there was high convergent validity of a measuring construct.

### 3.3. Control variables

We included several control variables that studies such as that by Weick and Martin (2006) have shown to influence creative atmosphere and creativity performance.

Gender differences may also influence creativity across domain- and task-specific factors, such as flexibility, limited applicability, fluency, uniqueness, and unusualness (Baer & Kaufman, 2008). We controlled for gender differences for tourism and hospitality students with effect coding in two dummy codes (0 male, 1 female). This study also categorized the different college levels into four types: Senior, Junior, Sophomore, and Freshman. Finally, the four regions of students' birthplace and learning were controlled because these may potentially influence creativity (Yanwei & Huifan, 2008).

## 4. Results

Table 2 reports the overview of the descriptive statistics of the means, standard deviations, and Pearson correlation coefficients for the variables used in this study. To avoid collinearity, we calculated the variance inflation factors (VIFs) to examine the effect of multicollinearity. The results show predictor values range from 3.04 to 3.60, which suggested that there was significant multicollinearity concern between dependent and independent variables.

The results of multiple stages of regression analysis for hypothesis tests of the study are shown in Table 3. Overall, the results support the theoretical prediction for the dimensions of interest. Model 1 captures the direct effects of professional competence on theoretical enhancement. The model shows the significance level at  $P < .001$  and  $R^2 = 0.206$ . The linkage between professional competence ( $\beta = .428$ ) and theoretical enhancement is statistically significant at  $P < .001$ , which suggests that professional competence is positively associated with theoretical enhancement. This finding indicates that students' theoretical enhancement will improve if teachers have a high level of professional competency. Accordingly, Hypothesis 1, which states that a greater professional competence of the teacher is more likely to be positively associated with theatrical enhancement, is strongly supported. In addition, the direct effect of professional competence ( $\beta = .388$ ) on empirical learning is statistically significant at the  $P < 0.001$  level and  $R^2 = 0.179$ . This finding shows that students would increase their empirical learning performance by obtaining abundant empirical experience from teachers' professional competence. Accordingly, Hypothesis 2, which states that the greater professional competence of the teacher is more likely positively associated with empirical learning, is supported.

Next, the study examined the direct relation between theoretical enhancement, empirical learning and creative atmosphere. Model 4 is significant at the  $P < .001$  level and  $R^2 = 0.328$ . The linkage between theoretical enhancement ( $\beta = 0.352$ ) and empirical learning ( $\beta = 0.346$ ) to creative atmosphere development is positive and statistically significant at the  $P < .001$

**Table 2**  
Means, standard deviations and correlations.

Variable	Mean	S.D.	Min	Max	1	2	3	4	VIF
1. Creative atmosphere	5.829	.687	2.857	7.000	(.767)				
2. Professional competence	6.014	.762	2.500	7.000	.355***	(.701)			3.04
3. Theoretical enhancement	5.789	.650	3.285	7.000	.510***	.544***	(.721)		3.39
4. Empirical learning	5.973	.674	2.500	7.000	.495***	.455***	.589***	(.790)	3.60

\*\*\*  $P < .001$ .

**Table 3**Regression results for *Creative atmosphere*.

Dependent variables	Theoretical enhancement		Empirical learning		Creative atmosphere					Sobel test	
	Model 1		Model 2		Model 3		Model 4		Model 5		
	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.	$\beta$		S.E.
Control variables											
<b>Gender</b>	-.064	.042	-.034	.043	-.027	.050	-.004	.043	.005	.044	
<b>Year of college</b>											
Freshman	.173**	.053	-.033	.054	.047	.063	-.008	.055	.000	.055	
Sophomore	.120*	.052	-.058	.054	-.095	.062	-.123*	.054	-.116*	.054	
Senior	.088	.069	-.217**	.072	-.043	.083	.004	.073	.000	.073	
<b>Region</b>											
City	-.140*	.058	-.147*	.060	-.309***	.069	-.212**	.060	-.212**	.060	
County town	-.098	.062	.029	.065	-.104	.074	-.083	.065	-.081	.065	
Rural areas	-.072	.057	-.151*	.059	-.093	.068	-.021	.060	-.017	.060	
Independent Variable											
Professional competence	.428***	.033	.388***	.034	.327***	.040			.052	.039	
Mediating Variable											
Theoretical enhancement							.352***	.040	.336***	.042	7.282***
Empirical learning							.346***	.039	.335***	.040	7.322***
Model statistics											
R <sup>2</sup>	.206		.179		.121		.328		.329		
R <sup>2</sup> <sub>adj</sub>	.198		.171		.112		.320		.320		
F	24.81***		20.90***		13.19***		41.27***		37.36***		
Observations	771		771		771		771		771		

\*  $P < .10$ .\*\*  $P < .05$ .\*\*\*  $P < .01$ .

level. The finding indicates that when students have a stronger theoretical foundation and empirical learning experience, this will be helpful in creative atmosphere development. Accordingly, [Hypothesis 3](#), which states that theatrical enhancement is more likely positively associated with creative atmosphere development, and [Hypothesis 4](#), which states that empirical learning is more likely positively associated with creative atmosphere development, are both supported.

The system procedure of mediating testing, in accordance with [Baron and Kenny \(1986\)](#), examines the mediating role of theoretical enhancement and empirical learning in influencing the relations between the independent variable, professional competency, and the dependent variable, creative atmosphere. The first step is to examine the effects of the independent variables on the mediation variable. As shown in Models 1 and 2 of [Table 3](#), professional competency is significantly related to theoretical enhancement ( $\beta=0.428$ ,  $P < .001$ ) and empirical learning ( $\beta=0.388$ ,  $P < .001$ ). Second, the independent variable, professional competency, was regressed on the independent variable, creative atmosphere. The results of Model 3 indicate that professional competency ( $\beta=0.327$ ,  $P < .001$ ) significantly influences creative atmosphere. Third, the mediator, theoretical enhancement and empirical learning, was regressed on the independent variable, creative atmosphere. Model 4 of [Table 3](#) shows that theoretical enhancement ( $\beta=0.352$ ,  $P < .001$ ) and empirical learning ( $\beta=0.346$ ,  $P < .001$ ) have a significant and positive effect on creative atmosphere development. Fourth, Model 5 shows that the previously significant linkages between professional competency and creative atmosphere are no longer significant when the critical roles of mediating theoretical enhancement and empirical learning are added to the model. However, theoretical enhancement ( $\beta=0.336$ ,  $P < .001$ ) and empirical learning ( $\beta=0.335$ ,  $P < .001$ ) remained significantly related to creative atmosphere development. The findings from this set of analyses suggest that theoretical enhancement and empirical learning fully mediate the relation between professional competency and creative atmosphere.

We further tested the significance of the indirect effects of our independent variable on the professional competency of creative atmosphere by using the additional examination of the Sobel test, which is a more direct test of the mediation hypothesis because it examines the combined effects of the path between the dependent variable and the moderator and the path between the moderator and the independent variable ([Sobel, 1982](#)). As shown in the final column of [Table 3](#), we found that theoretical enhancement ( $P < .001$ ) and empirical learning ( $P < .001$ ) have significant and indirect effects on creative atmosphere. The results of the Sobel test provide further support for the mediating role of theoretical enhancement and empirical learning in creating the relations between professional competency and creative atmosphere. Accordingly, [Hypotheses 5 and 6](#), which state the mediating role of theoretical enhancement and empirical learning, were confirmed through additional examinations of Sobel tests.

#### 4.1. Robustness tests: alternative and different universities examination for creative atmosphere

We separated the entire sample into four universities and used similar testing steps to verify the robustness of the results

**Table 4**  
Regression results for *Creative atmosphere*.

Dependent variables	University -1 (Department of Travel Management/ Department of Hospitality Management)										University -2 (Department of Travel Management)									
	Theoretical enhancement		Empirical learning		Creative atmosphere						Theoretical enhancement		Empirical learning		Creative atmosphere					
	Model 6		Model 7		Model 8		Model 9		Model 10		Model 11		Model 12		Model 13		Model 14		Model 15	
	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.	B	S.E.	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.
Control variables																				
<b>Gender</b>	-.028	.077	-.013	.073	-.023	.086	-.036	.078	-.012	.079	.212	.205	.117	.193	-.151	.192	-.307*	.146	-.269	.158
<b>Year of college</b>																				
Freshman																				
Sophomore	.086	.109	.363**	.104	.011	.122	-.142	.114	-.123	.114	-.103	.179	-.165	.168	-.005	.167	-.091	.136	-.093	.138
Senior	.034	.110	.267*	.105	-.187	.124	-.296*	.115	-.279*	.115	.176	.267	-.110	.251	.207	.250	.106	.205	.096	.207
<b>Home region</b>																				
City	.003	.101	-.205*	.096	-.266*	.113	-.201	.105	-.202	.104	-.227	.319	.049	.299	-.207	.297	-.144	.242	-.148	.244
County town	.257*	.122	-.035	.116	.189	.137	.139	.127	.138	.127	.328	.250	.282	.235	.231	.234	.010	.195	.010	.197
Rural areas	.035	.104	-.225*	.099	.029	.117	.089	.109	.091	.108	.159	.243	.111	.228	.052	.226	-.027	.181	-.044	.185
Independent Variable																				
Professional competence	.473***	.058	.449***	.055	.367***	.065			.113	.067	.342*	.199	.540**	.186	.434*	.185			.110	.171
Mediating Variable																				
Theoretical enhancement							.265***	.062	.239***	.064							.355*	.142	.344*	.145
Empirical learning							.340***	.065	.313***	.067							.420**	.141	.382*	.154
Model statistics																				
R <sup>2</sup>	.201		.221		.156		.292		.298		.260		.297		.289		.556		.562	
R <sup>2</sup> <sub>adj</sub>	.183		.205		.137		.274		.278		.233		.139		.129		.437		.426	
F	11.72***		13.32***		8.63***		16.82***		15.35***		1.35		1.88		1.81		4.70***		4.14**	
Observations	335		335		335		335		335		39		39							

\*  $p < 0.10$ .  
\*\*  $p < 0.05$ .  
\*\*\*  $p < 0.01$ .

**Table 5**  
Regression results for *Creative atmosphere*.

Dependent variables	University -3 (Department of Tourism Management)										University -4 (Department of Tourism Management)									
	Theoretical enhancement		Empirical learning		Creative atmosphere						Theoretical enhancement		Empirical learning		Creative atmosphere					
	Model 16		Model 17		Model 18		Model 19		Model 20		Model 21		Model 22		Model 23		Model 24		Model 25	
	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.	$\beta$	S.E.
Control variables																				
<b>Gender</b>	-.042	.084	-.065	.077	.022	.109	.090	.084	.071	.084	.323	.301	.035	.380	-.085	.380	-.230	.322	-.187	.324
<b>Year of college</b>																				
Freshman	.111	.105	.096	.096	.309*	.136	.245*	.105	.205	.106	.080	.137	.239	.173	-.138	.173	-.235	.146	-.257	.148
Sophomore	.110	.116	.091	.106	.294	.151	.238*	.115	.192	.117	.022	.131	.189	.166	.022	.166	-.025	.138	-.059	.141
Senior	-.033	.153	.021	.140	.166	.198	.234	.152	.181	.153	-.283	.440	.449	.556	.071	.556	.026	.472	-.034	.475
<b>Region</b>																				
City	-.050	.116	.085	.106	-.037	.151	.007	.116	-.031	.117	-.019	.086	-.202	.108	-.180	.108	-.087	.093	-.093	.093
County town	.033	.117	.103	.107	-.071	.152	-.091	.117	-.126	.118	.005	.088	-.013	.111	.051	.111	.053	.094	.055	.094
Rural areas	.076	.129	.113	.118	.042	.168	.026	.126	-.044	.130	.053	.079	-.234	.099	-.033	.099	.045	.086	.047	.086
Independent Variable																				
Professional competence	.362***	.074	.233**	.068	.259*	.097			-.154	.081	.384***	.048	.308***	.061	.295***	.061			.066	.059
Mediating Variable																				
Theoretical enhancement							.609***	.087	.657***	.089							.303***	.073	.269**	.079
Empirical learning							.301**	.098	.321**	.098							.413***	.062	.405***	.062
Model statistics																				
R <sup>2</sup>	.159		.086		.050		.426		.439		.292		.189		.164		.398		.402	
R <sup>2</sup> <sub>adj</sub>	.116		.038		.001		.392		.402		.264		.156		.131		.371		.372	
F	3.68***		1.82		1.03		12.71***		12.00***		10.25***		5.78***		4.89***		14.73***		13.52***	
Observations	164		164		164		164		164		233		233		233		233		233	

\*  $p < 0.10$ .

\*\*  $p < 0.05$ .

\*\*\*  $p < 0.01$ .



in [Tables 4](#) and [5](#). [Table 4](#) includes senior, junior, sophomore students, and [Table 5](#) includes all four university year levels, i.e., senior, junior, sophomore, and freshman. If these data showed characteristic adverse bias and differences from our results, the examination of results would have likely lost significance when the data were separated. The results of [Tables 4](#) and [5](#) show, in the direct effect tests, the coefficient for the 'professional competency' variable was positive and significant to theoretical enhancement in Models 6, 11, 16, and 21, which supports [Hypothesis 1](#). Similarly, the results of Models 7, 12, 17, and 22 provide evidence that supports [Hypothesis 2](#). Furthermore, the findings of Models 9, 14, 19 and 24 were similar to those of Model 4 in [Table 3](#) and provide evidence that the coefficient of theoretical foundation and empirical learning experience was positive and significantly influenced creative atmosphere development, which supports [Hypotheses 3 and 4](#).

We also expected that theoretical enhancement and empirical learning would mediate the relation between the independent variables, professional competency and creative atmosphere. In accordance with [Baron and Kenny's \(1986\)](#) procedure, we first examined the relation between the independent variables and the mediation variable. As shown in [Tables 4](#) and [5](#), Models 6 and 7 (University 1), Models 11 and 12 (University 2), Models 16 and 17 (University 3), and Models 21 and 22 (University 4), professional competency was significantly related to theoretical enhancement and empirical learning. Second, the direct impacts of the independent variables and the dependent variable were tested in Models 8, 13, 18 and 23, which provides evidence that professional competency significantly influenced creative atmosphere. Third, as demonstrated in [Table 4](#), Models 9 and 14, and as shown in [Table 5](#), Models 19 and 24, a significant relation exists between creative atmosphere and our mediator, theoretical enhancement and empirical learning. Fourth, as shown in Models 10 and 15 in [Table 4](#) and as Models 20 and 25 in [Table 5](#) demonstrate, we found that the previously significant relations between professional competency and creative atmosphere were no longer significant when theoretical foundation and empirical learning were added to the regression equation. However, theoretical enhancement and empirical learning remained significantly related to creative atmosphere. The findings from this set of analyses suggest that theoretical enhancement and empirical learning fully mediates the relation between professional competency and creative atmosphere development.

## 5. Discussion and conclusion

This research was designed to answer three questions that have not been resolved in tourism and hospitality education: (1) how does the professional competency of teachers impact theoretical enhancement and empirical learning, (2) how does theoretical enhancement and empirical learning affect the success of creative atmosphere development, and (3) how does professional competency influence creative atmosphere through theoretical enhancement and empirical learning? We found that certain aspects of professional competency did impact theoretical enhancement and empirical learning, which, in turn, impacted the level of creative atmosphere introduced.

Importantly, the implications for future education in this research highlights the relation between the critical role of teaching staff in tourism and hospitality education and the more dynamic process for creative atmosphere development. For example, we showed that professional competency, measured as teachers' professionalism, creative ability, creative consciousness and practical experience, is related to the creative atmosphere process. From an education perspective, hiring well-trained teachers with varying functional expertise appears to increase the likelihood that such a teacher will have the capability to combine the concepts of new tourism and hospitality trends and encourage students to exchange or interact with their ideas during the course to generate new ideas. It would be interesting to explore these new ideas with students and to determine whether this exchange and combination would increase creativity, while teachers effectively exploit their professional competencies to increase students' theoretical enhancement and empirical learning throughout the course. [Brookfield \(2015\)](#) finds that the skill level of the educator is positively related to theoretical enhancement and empirical learning of the student such that the greater the skill level of the educator, the greater the increase in student learning, which, in turn, leads to an improved learning atmosphere in the classroom. This study dealt with the problem of possible relations between teachers' professional skills and students' perceptions of classroom atmosphere. While it was assumed that the professional competency of the educator influences not only students' creative behaviors but also their perceptions of the reality of the industry, it was further verified that the theoretical and empirical course design may also influence students' perceptions of a creative climate ([Davies et al. 2013](#)). Such discussions allow the tourism and hospitality educator to expand on positions presented in previous studies as well as to consider new implications and theoretical issues with respect to the development of creative classroom environments. The results of this study will advance pedagogical research in higher education, specifically within the subject area of tourism and hospitality education design.

Our findings that theoretical enhancement and empirical learning are related to developing a creative atmosphere support [Peterson's \(2001\)](#) contention that in order to be successful in developing students' creative abilities, it is critical to be able to establish a foundational theory and identify product values through empirical learning in the classroom. We concur with [Dale and Robinson \(2001\)](#) that tourism education needs to develop and continually meet changing tourist's needs in a dynamic environment. In Chinese tourism and hospitality education, students prefer concrete, active learning styles over those that focus only on theory and description ([Zagonari, 2009](#)). Consistent with this trend, the professional competency of the educator to design and implement hands-on activities and 'specific and generic skills' to enhance students' skills and experiences for future careers has become increasingly important ([Pan & Jamnia, 2014](#)). This concept is even more critical in the Chinese tourism and hospitality industry where education is a priority for students and is necessary in government education policy making ([Chang, Chung, & Hsu, 2012](#); [Chen & Shen, 2012](#)). With a well-designed course that is

based on the professional competencies of the educator, students can integrate empirical learning through the academic foundation in a business setting, which may enhance their creative thinking and result in an increase in novel ideas (Cheng, 2011). Thus, while professional competency is considered a foundational skill for educators, a creative atmosphere in the field of tourism education is also necessary to promote creative thinking and competitive capability.

Moreover, when comparing the theoretical and empirical importance for future employers of tourism and hospitality students, one may usefully examine the conditions and functions under which the tourism management skills are more useful (Apostolopoulos et al. 2013). As Canziani et al. (2012) suggested, educators have joined to broadcast critical tourism value from the existing literature to develop students' theoretical concepts in identifying and prioritizing high-utility education strategies. However, according to Wang, Chiang, and Lee (2014), empirical learning may increase the adaptability and competitiveness of students before graduation. In future tourism and hospitality education research, efforts should be made to identify which tourism and hospitality theory should be emphasized and where these empirical learning samples should be included in the course design. We speculate that the importance of theoretical and empirical issues did not show significant coefficients here because there was minimal variation in this measure at the individual level.

This research also suggests that theoretical enhancement and empirical learning play a strategic role in tourism and hospitality education. We found that a theoretical and empirical course design increases student awareness of tourism environment changes and encourages their interest in learning. When students are aware of changes in the tourism and hospitality environment, the students may be more open to new and novel information and may be more likely to focus on learning tourism theory and interacting with other classmates in the classroom. Similarly, students who cultivate a creative atmosphere are better able to stimulate new ideas and exchange information with others. Thus, although individualism may have efficiency benefits for increased creativity capability, appropriate theoretical enhancement and empirical learning appear necessary for creative atmosphere development when it is useful to awaken students' awareness of tourism and hospitality environment changes.

Despite the contributions and implications of this study, certain limitations also arose and provide possible future education research directions. First, the survey used in this study is based on self-reported data from students to show their real experiences and feelings regarding the education design, which may have the possibility of a common method variance result. Although this study adapted Podsakoff, MacKenzie, Lee, and Podsakoff (2003) suggested procedure for performing a statistical single-factor test, we emphasized that there were no right or wrong answers and guaranteed anonymity when distributing the questionnaire. Through rigorous statistical tests, this study did not find a significant common method variance problem in our data set. However, this study still includes this issue as a potential limitation, thus providing evidence for future research in examining the common method variance with different methods. Second, development of a creative atmosphere is a longitudinal process and needs educators and students' cooperation and communication. The survey technique and questionnaire can provide a cross-sectional picture, which also means that future studies can collect both educator and student perspectives to explore how a creative atmosphere may truly reflect the dynamic environment and changing customer needs. Third, in this study, we cannot determine whether the teacher has practical work experience. Lunenberg, Korthagen, and Swennen (2007) suggested that teachers with practical work experience may bring new kinds of learning processes; new ways of identifying, thinking about and solving problems; and new instructional methods compared to the inexperienced educator. Future tourism and hospitality research may extend the findings of this study and discriminate between academic experience and no academic experience to examine the influence of experience on the creative atmosphere. Finally, as the study participants were drawn from the population of tourism and hospitality students, the generalizability of the results to other Asian areas or other countries is unknown due to the multiple cultural differences and the varied learning environments in education systems. Further, because of the cultural differences and the limitations in education resource allocation, each country's tourism and hospitality students may have unique characteristics forged by their unique learning environments. Thus, follow-up studies can extend the findings of this study by comparing the tourism and hospitality education systems in different countries, examining the differences in the design of various creative environments and generalizing the results to a more international or global context that is applicable to the characteristics of different businesses and activities in other countries. Furthermore, the effects of the various attributes of a creative atmosphere on the creativity of the students deserve future investigation.

In conclusion, this study examined the relation among a teacher's existing professional competency, appropriate theoretical enhancement and empirical learning in a course and introduced a new perspective and integrated concepts for creative atmosphere development. By empirically linking tourism, hospitality theory foundation and empirical case design, which may increase organizational or classroom creative climates to increase creativity and critical thinking capability, we provide a more complete picture of a creative environment and advance the literature on tourism education design. By connecting creativity encouragement to the original sources of university course design and determining the critical attributes for future education, we have demonstrated that the study of the creative environment has promise for increasing understanding of how students evolve and adapt to their learning environments. Finally, by demonstrating that theoretical and empirical learning mediates the relation between professional competency and creative atmosphere, we show how two moderately divergent streams in the creative environment, one moderately internal (theoretical enhancement) and one moderately external (empirical learning), are related and critical for helping students adapt to future environmental requirements. However, more conceptual and empirical work is necessary if researchers are to fully understand how a creative environment is created and exploited in organizations or in the classroom.

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