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Revista de cercetare și intervenție socială

ISSN: 1583-3410 (print), ISSN: 1584-5397 (electronic)
Selected by coverage in Social Sciences Citation Index, ISI databases

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Hsiou-Hsiang LIU

Revista de cercetare și intervenție socială, 2015, vol. 49, pp. 127-138

The online version of this article can be found at:
www.rcis.ro, *www.doaj.org* and *www.scopus.com*

Published by:
Expert Projects Publishing House

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publishing

On behalf of:
„Alexandru Ioan Cuza" University,
Department of Sociology and Social Work
and
Holt Romania Foundation
REVISTA DE CERCETARE SI INTERVENTIE SOCIALA
is indexed by ISI Thomson Reuters - Social Sciences Citation Index
(Sociology and Social Work Domains)

Tourism Education: Using Curriculum Mapping to Shorten the Gap between Learning and Applying

Hsiou-Hsiang LIU[1]

Abstract

As higher education is common in Taiwan, university graduates not only face the problem of unemployment, but often have to take up jobs that are not related to their discipline. The objective of this study is to understand whether the curriculum mapping system function is able to assist graduates in their job selection. This study revealed a correlation between 'the first recommended job' and the 'current job', thus verifying the practicality of curriculum mapping with integrated job recommendation functions.

Keywords: tourism education, curriculum mapping, competency, job recommendation.

Introduction

Taiwan's *Cheers Happy Work Magazine* surveyed the presidents of 155 domestic universities (Ninety percent of, 2008). The results showed that 99% of them believed university education should be responsible for employment issues. Employability refers to students' competency to 'get a job', 'keep the job', and 'do well on the job' after they go through the learning process (Harvey, Locke, & Morey, 2002). Past university education emphasised students' smooth employment but neglected their employability. However, the employability of university students should be a new indicator in measuring university performance (Wang, 2008). Yang (2014) believes that higher education should allow all students to fully use their time in school to develop employability and that this should be implemented throughout the entire university curriculum. As higher education is

[1] National Kaohsiung University of Applied Sciences, Department of Tourism Management, Kaohsiung City 807, Taiwan R.O.C. Email: jackliu@cc.kuas.edu.tw

common in Taiwan, university graduates not only face the problem of unemployment, but also often have to take up jobs that are not related to their discipline. The objective of this study is to understand whether the curriculum mapping system function is able to assist graduates in their job selection. Curriculum mapping is a tool that assists teachers to effectively apply teaching contents, skills, and assessments, thereby improving them, which is an important aspect of the teaching process (Koppang, 2004). Curriculum mapping is focused on elucidating the intended, delivered, and received curriculum based on the outcomes expected document (Plaza, Draugalis, Slack, Skrepnek, & Sauer, 2007). Taiwan's Ministry of Education (2008a) actively promoted the Teaching Excellence Project. According to its planning objectives, the objective of curriculum mapping is to assist individual departments in developing their own curriculum maps to strengthen the relevance between learning content and practice.

Under the impetus of the Teaching Excellence Project of the Ministry of Education, departments in various universities in Taiwan have gradually completed curriculum maps. In addition to assisting students in course selection, curriculum mapping also has the function of reviewing whether the setup of courses is complete. In recent years, universities in Taiwan have actively integrated curriculum mapping features with career development, so that students can clearly understand the relevance between their intended field of study and the competencies required for the job to which they aspire. This allows them to prepare for the development of relevant career competencies. However, there has yet to be any research on the practicality of the universities' integration of curriculum mapping and career recommendation functions. In order to verify the effectiveness of the system functions, this study investigated whether or not there is a relationship between curriculum maps with an integrated 'job recommendation' function and future jobs after graduation. A higher degree of association indicates a greater effectiveness of the job recommendation function of curriculum mapping, whereas a lower the degree of association shows that the course undertaken by students or the knowledge they already possess has failed to be integrated and applied in the current job; a gap may exist between what was learnt and was required for the job. In order to understand the practicality of integrating curriculum mapping with student career development, this study uses the Tourism Management Department of National Kaohsiung University of Applied Sciences (KUAS) as an example for analysing the degree of association between curriculum mapping job recommendations and students' current jobs.

KUAS Tourism Management Department's implementation of curriculum mapping with integrated job recommendation functions

KUAS established the four-year Department of Tourism Management in 1999, which awards a bachelor's degree after the completion of the course. The areas of specialisation are divided into two major programs: Tourism Management and Hospitality Management. At present, the department has developed a curriculum map with integrated job recommendation functions. Using the 'Development map of result-oriented education curriculum mapping' as the basis, with reference to the curriculum mapping processes of the College of Education at Colorado State University in Colorado, Curtin University of Technology in Australia, and Polytechnic University in Hong Kong, Li (2009) proposed the following key steps for establishing university curriculum mapping: (1) The Office of Academic Affairs develops the plan and provides examples; (2) Establish the communication platform for schools, colleges, and departments; (3) Develop the goals and core competencies of schools, colleges, and departments; (4) Integrate and compare the relationship between the existing curriculum and the core competencies of schools, colleges, and departments; (5) Develop and adjust the department-level professional curriculum mapping; (6) Integrate university curriculum mapping; (7) Construct a curriculum mapping and learning path website; (8) Establish feedback and improvement mechanisms.

Based on the above steps, curriculum mapping with integrated job recommendation functions for the Department of Tourism Management in KUAS was started and completed between 2009 and 2013. During the process, the Office of Academic Affairs provided form samples. Table 1 is the weight comparison table for career path and core competencies of the Tourism Management Department. Through discussions in several focus group meetings that included teachers from the Tourism Management Department and industry experts, the core competencies required by the four types of talents that the department intends to cultivate were formulated, with suitable weightage assigned to the core competency indicators.

Subsequently, the Department of Tourism Management further planned courses related to the core competencies to be cultivated (Table 2) and invited field experts and alumni to participate via the focus group method and the Delphi method for the formulation of relevant curricula and the corresponding weight relationship of the core competency indicators. Teachers also need to refer to the core competencies for the subjects they teach in order to plan their teaching achieve the various competency indicators intended by the course, thereby cultivating the corresponding core competencies.

Table 1 *Career Path and Core Competency Weight Comparison Table for the Department of Tourism Management in KUAS*

Core Competency / Career	CC_1	CC_2	… CC_j …	CC_n
Hotel Management Personnel	W_{11}	W_{12}	… W_{1j} …	W_{1n}
Food & Beverage (F&B) Management Personnel	W_{21}	W_{22}	… W_{2j} …	W_{2n}
Tourism Transportation Management Personnel	…	…	…	…
Tourism and Recreations Personnel	W_{m1}	W_{m2}	… W_{mj} …	W_{mn}

Note: *The weight* W_{ij} *of each core competency is calculated at 100 points.*

Table 2 *Comparison of Curriculum and Core Competencies, Competency Indicators, and Weight*

Competency Indicator / Course Title	CI_1			CI_2		CI_3	CI_4	
CS_1	w_{11}	w_{12}	w_{13}	w_{14}	…	CI_k	…	CI_m
CS_2	w_{21}	w_{22}	w_{23}	w_{24}	…	w_{1k}	…	w_{1m}
…	…	…	…	…	…	w_{ik}	…	w_{im}
CS_n	w_{n1}	w_{n2}	w_{n3}	w_{n4}	…	…	…	…

The weight w_{ik} *of the core competency indicators to be cultivated in each course is measured at 100 points.*

Once a student's results are keyed in to the form, the value of various core competency indicators of the student can be obtained through system computation. Comparison of the minimum and maximum values of the sum of the difference between the distribution of core competencies in the student's results and the distribution of core competencies in the student's job will provide an understanding of the most suitable job for the student at present, as well as predict a suitable future job for him or her.

Example of the application of curriculum mapping with integrated career recommendation functions by students in the Department of Tourism Management at KUAS

Using Sophomore A from the Tourism Management Department in 2014 as an example, Table 3 provides a specific understanding of the gap in the student's competency. Table 4 provides a list of recommended courses, where 'elective' courses may be added to cultivate competencies that are lacking. Once the lacking competency has been sufficiently developed, the 'inadequate' symbol in the right column of Table 3 can be removed. Table 5 shows that according to the courses undertaken by student A, competencies for 'hotel management personnel' were relatively more developed; hence, priority should be given to recommending such jobs, followed by 'F&B management personnel', 'tourism transportation management personnel', and 'tourism and leisure recreation personnel'.

Table 3 *Sophomore A's Hotel Management Competency Development*

Name of Competency	Individual Practice Value	The Set Value of Department of Tourism	Remarks
1. Operation Competency	16	20	Inadequate
2. Planning Management Competency	9	10	Inadequate
3. F&B Management Competency	20	10	–
4. Business Management Competency	18	10	–
5. Hotel Management Competency	19	25	Inadequate
6. Language Competency	20	15	–
7. Comprehensive Competency	0	10	Inadequate

Table 4 *List of Recommended Courses for Hotel Management Personnel Training*

Name of Competency	Course Title	Add List of Shortlisted Electives
1. Operation Competency	C_{1-1}	Elective
	C_{1-2}	Elective
	..... C_{1-n}	Elective
2. Planning Management Competency	C_{2-1}	Elective
……	……C_{2-n}	Elective

Table 5 *Curriculum Mapping with Integrated Career Recommendation*

Job / Level of Competency Possessed	Hotel Management Personnel		F&B Management Personnel		Tourism Transportation Management Personnel		Tourism and Leisure Recreation Personnel	
	Individual Practice Value	Department Set Value	Individual Practice Value	Department Set Value	Individual Practice Value	Department Set Value	Individual Practice Value	Department Set Value
Operation Competency	16	20	19	25	20	25	14	20
Planning Management Competency	9	10	11	10	12	15	8	10
F&B Management Competency	20	10	24	30	–	–	18	5
Business Management Capability	18	10	22	15	24	10	16	10
Tourism Transportation Management Competency	–	–	–	–	18	25	–	–
Hotel Management Competency	19	25	–	–	–	–	17	5
Language Competency	20	15	24	10	27	15	18	10
Comprehensive Competency	0	10	0	10	0	10	0	10
Tourism and Recreation Management Competency	–	–	–	–	–	–	11	30
Job Recommendation Sorting	First (Less than 21)		Second (Less than 22)		Third (Less than 25)		Fourth (Less than 37)	

Research method

This study employed a telephone survey based on several existing student and curricular datasets to understand the relationships between job recommendations and current jobs. According to the direction of career development set by the Department of Tourism Management at KUAS, the department aims to nurture four types of talents: hotel management personnel, food and beverage (F&B) management personnel, tourism transportation management personnel, and tourism and leisure recreation management personnel. For this study, sorting of job recommendations was conducted based on the four types of talents nurtured by the Department of Tourism.

In terms of research objects, the Department of Tourism Management of National Kaohsiung University of Applied Sciences began planning its curriculum mapping in 2009 and completed it in 2013. From 2009 to 2014, the university nurtured six cohorts of graduates. This study made use of the random sampling method to select 50 graduates from the 2011 cohort's day class from the Department of Tourism Management as the research participants.

In terms of data collection, the researchers first gained an understanding of the participants' learning and competency development status in school, as well as the sequence of job recommendations by curriculum mapping. In addition, the researchers investigated the participants' current jobs via a telephone survey conducted in March and April 2014. After excluding three participants who did not answer the phone or changed their phone number, data were collected from a total of 47 participants. For the data analysis, the study adopted the contingency coefficient method for analyzing the degree of association between the first job recommended by the curriculum mapping with integrated job recommendation functions and the participant's current job to verify the effectiveness of the system function.

Findings and discussion

Among the 47 participants with valid sample data, 42 participants were working in fields related to the cultivation direction of the Department of Tourism Management. Among them, 35 people had undertaken the first job recommended by the job recommendation function, while 7 were working in the second to fourth jobs recommended. Five people did not undertake a job related to their major (Table 6).

Table 6 *Basic Information on the Survey Sample*

Current Job **First Job Recommended**	Number of People	Percentage (%)
Hotel Management Personnel	15	31.92
F&B Management Personnel	8	17.02
Tourism Transportation Management Personnel	7	14.89
Tourism and recreation Personnel	5	10.64
The second to fourth job recommendations	7	14.89
Other jobs not mentioned above	5	10.64

The study found that for research participants whose first job recommended by the curriculum mapping with integrated job recommendation functions was 'hotel management personnel', the contingency coefficient between their first recommended job and their current job was significant (contingency coefficient = .478, $p < .01$), indicating relevance between the first job recommendation of 'hotel management personnel' and jobs undertaken after graduation. For graduates whose recommended job was 'F&B management personnel', the contingency coefficient between their recommended first job choice and their current job was significant (contingency coefficient = .679, $p < .001$), indicating that the first job recommendation of 'F&B management personnel' was related to their job after graduation. For graduates who were recommended 'tourism transportation management personnel' as their first job choice, the contingency coefficient between their first recommended job and their current job was significant (contingency coefficient = .533, $p < .001$), indicating that the first job recommendation of 'tourism transportation management personnel' was related to their job after graduation. For graduates who were recommended 'tourism and leisure recreation personnel' as their first job choice, the contingency coefficient between their first recommended job and their current job was significant (contingency coefficient = .608, $p < .001$), indicating that the first job recommendation of 'tourism and leisure recreation personnel' was related to their current job after graduation (Table 7).

Table 7. *Chi-Square Test Contingency Coefficients Between Actual Job and the First Recommended Job*

Actual Work / The First Recommended Job	Hotel Management Personnel	F&B Management Personnel	Tourism Transportation Management Personnel	Tourism and Leisure Recreation Personnel
Hotel Management Personnel	.478**			
F&B Management Personnel		.679***		
Tourism Transportation Management Personnel			.533***	
Tourism and Leisure Recreation Personnel				.608***

** $p < .01$ *** $p < .001$

The study revealed a correlation between 'the first recommended job' and 'current job'. All of the correlation coefficients exceeded .48, thereby confirming the practicality of curriculum mapping with integrated job recommendation functions. However, whether curriculum mapping with integrated job recommendation functions is suitable for all students still needs to be further explored. The survey data of this study showed 5 graduates who did not undertake jobs related to their majors, indicating that curriculum mapping with integrated job recommendation functions did not apply to a minority of students. The job recommendations provided by the curriculum mapping in this study serve only as a reference, although the function is intended for the benefit of students. There are too many factors affecting the actual job choices of graduates. According to the Ministry of Education of the Republic of China, Taiwan (2008b), 85 schools housed and offered 164 tourism, hospitality, and recreation departments and programs as of the end of 2007. However, the number of graduates from tourism related departments in Taiwan far outweighs the demands of the industry. In addition, the extended working hours of service personnel and unattractive salaries are also factors that deter graduates from relevant schools from joining the workforce. All these are indications of the complex relationship between learning and employment.

In addition, a curriculum map can be viewed as akin to a roadmap of a curriculum, guiding its users – students, faculty members, teachers, curriculum planners, evaluators, and coordinators – though the various elements of the curriculum and their interconnections (Willett, 2008). A curriculum map also can help to identify gaps and redundancies in a curriculum by providing answers to the

question 'Where do we teach what?' Hale (2009) pointed out that for dynamic curriculum maps, in addition to the requirement for using a network to draw up the curriculum mapping system, continuous evaluation of the curriculum is also very important. Curriculum maps are not the end of curriculum development, but the starting point for program readjustment (Li, 2011). We believe that in order to fully leverage the function of university curriculum mapping, other than evaluating static curriculum information, the effectiveness the dynamic system functions also need to be understood to provide values in guiding students in their choices and progress along a suitable path.

Conclusions and recommendations

Curriculum maps provide students with information about the program structure and faculty expectations. They can be used to measure the depth and breadth of tourism and hospitality programs across the range of potential career tracks. This study revealed a correlation between 'the first recommended job' and the 'current job', thus verifying the practicality of curriculum mapping with integrated job recommendation functions. Based on the construction and examination of the findings in this study, several suggestions are proposed as follows.

Considering that in addition to receiving education on professional courses, students also take courses related to arts and cultures and other informal courses, the curriculum mapping framework is built on assumptions from an instructor's perspective, and it can be further expanded to include the student perspective by capturing experienced and learned dimensions of the curriculum (Veltri, Webb, Matveev, & Zapatero, 2011). The tourism and hospitality educations assist students in the integration of subjects in different fields, especially the study of aesthetics, arts, and cultures, the exposure to which can be adopted in their careers (Chang & Hsu, 2010). The study found that although the integration of curriculum mapping and job recommendation function has reference value, a minority of graduates had not undertaken jobs that directly related to their major. The environment of tourism and hospitality industry is constantly changing (Baum, 1990); therefore, given the pressure of competition, it is understandable that some students choose not to undertake jobs related to their major in the Department of Tourism Management. The tourism and hospitality education system should cultivate students with professional skills, independent thinking, and cultural sensitivity. Further, in addition to effectively guide students in choosing their future jobs, completing their study path in order to complete their studies and master the competencies that they have acquired, we must also consider how curriculum mapping could be used to explore flexible areas that are unknown and unpredictable to give due respect to the unique values of students in order to develop curriculum maps that are more adaptive.

Curriculum mapping provides cognitive scaffolding for teaching and learning processes and gives us a visual tool to study the integration of program curricula (Veltri et al., 2011). It is important to evaluate the quality of hospitality, tourism, and leisure programs. Evaluation attempts to satisfy the needs of stakeholders as well as help schools to establish future goals that match industrial expectations (Chang & Hsu, 2010). Becket and Brookes (2005) mentioned that evaluation should comprise both quantitative and the qualitative metrics to ensure consistency between teaching quality and stated goals. Therefore, further interviews with graduates are recommended for subsequent researches to collect qualitative data to understand the processes and considerations involved in their employment choices, as well as to serve as a reference basis for curriculum innovation.

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