

Organizers 主辦機構：



THE HONG KONG
POLYTECHNIC UNIVERSITY
香港理工大學



UNWTO • OMT • IAHGTO

ISBN No. 962-367-545-3

Third China Tourism Forum 第三屆中國旅遊論壇

FORUM PROCEEDINGS 論壇文集

Hong Kong 香港 | 15-16 / 12 / 2006

Sponsor 贊助機構：

HOTEL
ASIA-PACIFIC
For hospitality professionals

TABLE OF CONTENTS 目录

SECTION I: PAPERS IN ENGLISH	1
第一部分：英文论文	
TOURISM MANAGEMENT AND BIODIVERSITY CONSERVATION: XISHUANGBANNA BIOSPHERE RESERVE, SOUTH CHINA	2
CORAZON CATIBOG-SINHA JIE WEN 旅游管理与生物多样性保护：以南中国西双版纳生物保护区为例	
CULTURAL TOURISM DEVELOPMENT AND MARKETING IN SINGAPORE	16
LEONG CHOON CHIANG 新加坡文化旅游的发展和营销	
SURVEY OF HIGH SCHOOL INTERNSHIP PROVIDERS	23
JEANNE P. FRIEDMAN LUPE FERRAN DIAZ 高中实习机构调查	
E-TOURISM CURRICULA DEVELOPMENT IN TYROL: A PRELIMINARY STUDY REPORT	37
MATTHIAS FUCHS WOLFRAM HÖPKEN PETER MIRSKI BERND AINEDTER ANDREAS LEMBACHER 蒂罗尔电子旅游课程发展的初步研究报告	
THE HONG KONG CROSS-BORDER SHOPPERS: WHO AND WHY?	50
TAK-KEE HUI HO-FUK LAU KELVIN KIN-CHEUNG CHAN 香港过境购物者：谁，为什么？	
GUANGZHOU AND ITS PROSPECT AS AN INTERNATIONAL EXHIBITION CENTRE: THE PERCEPTIONS OF THE UK EXHIBITORS AND THOSE OF THE ASIAN EXHIBITION ORGANIZERS.....	57
XIN JIN 从英国展览商及亚洲展览会主办机构看广州作为国际展览中心的发展前景	
EVALUATIONS OF COOPERATION LEVELS ON REGIONAL TOURISM PROMOTION ALLIANCES' WEBSITES.....	68
CLAIRE LAU ROB LAW ADA LO 评估区域旅游促进联盟网站的合作水平	
CHINESE POLYTECHNIC STUDENTS' TRAVEL PREFERENCES	80
ROBERTA WONG LEUNG CHUN YANG HE 中国理工学生的旅游偏好	
DESTINATION IMAGE OF GUANGZHOU AS PERCEIVED BY RESIDENTS AND VISITORS	88
TRACY YING LU LILI ZHANG HOWARD ADLER SHICHANG FENG 广州居民和游客感知的广州旅游形象	
WHAT HAVE TOURISM RESEARCHERS PREVIOUSLY DONE? EVIDENCE FROM THE JOURNAL OF ANNALS OF TOURISM RESEARCH.....	98
EMILY MA ROB LAW 从《旅游研究纪事》看旅游业研究人员的研究成果	

HOSPITALITY LEADERSHIP IN THE EMERGING CHINA MARKETPLACE.....	112
THOMAS A. MAIER	
中国酒店业领导层面对的问题	
CREATING SUSTAINABLE TOURISM IN CHINA: EQUITY, EQUALITY AND RESPONSIBILITY	123
SHARON MOORE JULIE JIE WEN	
发展中国可持续旅游：公正，平等和责任	
CREATING COMPETITIVE ADVANTAGES THROUGH HUMAN RESOURCE STRATEGY IN INTERNATIONAL LODGING ORGANIZATIONS.....	132
MOIRA PRAXEDES JEANNA ABBOTT	
人力资源策略：创造国际酒店组织的竞争优势	
MANAGING VOCATIONAL QUALIFICATION DEVELOPMENT	140
PHILIPPE ROSSITER KATHRYN BENZINE LI LI	
专业认可资格的管理	
STUDY ON HOTEL INDUSTRY CONVERGENCE AND ITS MEASURE IN CHINA ..	153
JUPING SHU BIN DAI	
试论饭店产业融合及其程度测量	
束菊萍 戴斌	
PERCEPTION AND OVERALL SATISFACTION OF VISITORS ABOUT MANAGEMENT OF CHANGBAISHAN BIOSPHERE RESERVE	167
GUOYUN SUN	
游客对长白山生态旅游保护区的认知和满意度	
孙国云	
A STUDY ON REGIONAL COOPERATION IN CHINA IN VIEW OF INSTITUTION ..	179
LI SUN YING-LI ZHAO PENG-FEI XIE	
从院校的角度研究中国区域合作	
A COMPARISON OF THREE HOTEL AND TOURISM MANAGEMENT PROGRAMS IN CHINA	185
CANDY TANG ROB LAW	
比较中国三个酒店及旅游业管理课程	
FORMATION OF TOURISM CLUSTER AS STRATEGY FOR SUSTAINABLE TOURISM DEVELOPMENT IN HONG KONG: THE CASE OF LANTAU ISLAND.....	197
TIN WEI TO	
旅游区作为可持续旅游的策略：以大屿山为例	
INFLUENCES OF JOINT-VENTURE OWNERSHIP ON HUMAN RESOURCE DEVELOPMENT PRACTICES IN CHINA'S HOTELS.....	210
YU WANG GANG LI	
合资经营对中国酒店人力资源发展的影响	
TRADITIONAL AESTHETIC CULTURE IN THE DEVELOPMENT OF CHINA'S WORLD HERITAGE TOURISM: EXTRAORDINARY BEAUTY AND HUMANISTIC SOPHISTICATION.....	220
ZICHAO WANG ZILAN WANG KELING WANG	
中国世界遗产旅游发展中的传统审美文化——惊人的美和人文深度	

ANALYSIS OF THE SPATIAL DISTRIBUTION OF TOURISM IN CHINA.....	230
JULIE JIE WEN SHARON MOORE CORAZON SINHA	
分析中国旅游的空间分布	
CHINA'S POLICIES ON FOREIGN INVESTED TRAVEL AGENCIES UPON ITS ENTRY TO WTO	243
BILL JING XU SOPHIA JIAJIA WU	
中国入世后对外资旅行社的政策	
THE FACTORS IN THE ASSESSMENT OF AUTHENTICITY IN TOURISM ACTIVITIES: A CASE STUDY OF JIUZHAIGOU FOLK TOURISM ACTIVITIES	251
JUN ZHANG	
旅游活动真实性的评估因素：以九寨沟旅游民族活动为例	
RESEARCH ON THE MASS COMMUNICATION OF THE PROTECTION OF INTANGIBLE CULTURAL HERITAGE: TAKING THE RESEARCH ON TELEVISION PROGRAMS AS AN EXAMPLE.....	260
YING ZHANG PINGPING LI	
利用大众传播保护有形文化遗产：以电视节目为例	
FEASIBILITY OF MEDICAL TOURISM IN XIAMEN.....	274
YING ZHANG JIN ZHAO	
厦门发展医疗旅游的可行性	
COMMUNITY PARTICIPATION RESEARCH OF HUTONG TOURISM IN BEIJING... ..	288
YING ZHANG ZHUO CHEN JIANMING LI	
北京胡同旅游的社区参与研究	
CAPABILITY MATURITY MODEL (CMM) TO EVALUATE WEBSITES OF CHINESE 4A SCENERY SPOTS	302
LINA ZHONG JUN SHAO BIHU WU	
评估中国 4A级旅游景区网站的成熟度模型	
SECTION II: PAPERS IN CHINESE	316
第二部分：中文论文	
旅游地农民问题研究——以广东丹霞山景区为例	317
陈薇	
A STUDY ON PEASANTS PROBLEMS IN SCENIC AREA: CASE STUDY OF DANXIA MOUNTAIN IN GUANGDONG PROVINCE	
WEI CHEN	
导游人员：薪酬、态度与服务表现研究——以广东省某著名旅行社为例	331
卓友森 梁婷 凌丽莉	
TOURIST GUIDE: COMPENSATION, MENTALITY AND PERFORMANCE ---- A CASE STUDY OF A FAMOUS PRIVATE OWNED TRAVEL AGENCY OF GUANGDONG	
EDWARD CHEUK SUNNY TING LIANG LILI LING	
民族旅游：两种传统文化承受力比较研究	354
李湮 吕宛青	
ETHNIC TOURISM: THE COMPARISON BETWEEN TWO TYPES OF CARRYING CAPACITY OF TRADITIONAL CULTURE	
YAN LI WANQING LV	

从“蓝海战略”反思本土经济型酒店的价值创新.....	362
刘静艳 梁婷	
THE VALUE INNOVATION OF BUDGET HOTELS IN CHINA CONSIDERING BLUE OCEAN STRATEGY	
JINGYAN LIU TING LIANG	
大连市旅游营销策略探讨.....	369
马林	
A STUDY ON THE STRATEGY OF TOUR MARKETING IN DALIAN CITY	
LIN MA	
“独乐乐，众乐乐，孰乐？”：旅游虚拟社区“结伴旅行”之质性研究.....	378
苗学玲 保继刚	
THE IMPACT OF ONLINE TRAVEL COMMUNITIES ON NON-STANDARDIZED GROUP TRAVEL: A QUALITATIVE ANALYSIS	
XUELING MIAO JIGANG BAO	
穗港澳居民环城游憩行为比较研究.....	390
彭顺生 张玉莎	
COMPARISON OF REBAM RESORT BEHAVIORS AMONG GUANGZHOU, HONG KONG AND MACAU CITIZENS	
SHUNSHENG PENG YUSHA ZHANG	
旅游企业信用缺失的道德治理.....	403
齐善鸿 吕波	
ETHICS GOVERNANCE OF THE CREDIT CRISIS IN TOURISM CORPORATIONS	
SHANHONG QI BO LV	
对“出境旅游押金”的法律分析及现状反思.....	411
秦岭南	
A STUDY ON OUTBOUND TOURIST'S DEPOSITS: A LEGAL PERSPECTIVE	
LINGNAN QIN	
中国中等城市家庭游憩行为研究——以衢州为例.....	419
苏国良 党宁 吴必虎	
RESEARCH ON FAMILY RECREATION BEHAVIORS OF MEDIUM-SIZE CITIES IN CHINA: QUZHOU CITY AS A CASE	
GUOLIANG SU NING DANG BIHU WU	
北京市居民旅游行为特征分析.....	432
徐菊凤	
THE TOURIST BEHAVIOR AND PERCEPTION ANALYSIS ON THE RESIDENTS IN BEIJING CITY	
JU-FENG XU	
旅游景区类上市公司资本结构分析.....	444
章晓盛	
A STUDY ON CAPITAL STRUCTURE OF THE LISTED TOURISM ATTRACTION-OPERATING COMPANIES	
XIAOSHENG ZHANG	

E-TOURISM CURRICULA DEVELOPMENT IN TYROL: A PRELIMINARY STUDY REPORT

Matthias Fuchs

eTourism Competence Center Austria (ECCA)

Wolfram Höpken

eTourism Competence Center Austria (ECCA)

Peter Mirski

Management and Applied Informatics
Management Center Innsbruck (MCI)

Bernd Ainedter

International Economics and Business Studies
Leopold Franzens Universität, Innsbruck (LFU)

Andreas Lembacher

Management and Applied Informatics
Management Center Innsbruck (MCI)

Abstract

The paper is presenting an ongoing information and communication technology (ICT) curriculum development project for the tourism industry, called *eCurriculum*. After specifying the objectives of the project based on recent labour market data, the various development steps of a curriculum prototype are discussed. Based on Porter and Millar's (1985) *value chain model* the (re-)qualification requirements of the Tyrolean hotel sector within the knowledge field of ICT have been recorded by interviewing a representative number of hotel employees. The initially developed curriculum prototype was adapted based on these results.

Key Words: curriculum development, eTourism, further training, hotel industry

蒂罗尔电子旅游课程发展的初步研究报告

Matthias Fuchs

奥地利电子旅游竞争力中心(ECCA)

Wolfram Höpken

奥地利电子旅游竞争力中心(ECCA)

Peter Mirski

因斯布鲁克管理中心(MCI)
管理和应用信息学

Bernd Ainedter

奥地利茵思堡大学
国际经济及商务研究

Andreas Lembacher

因斯布鲁克管理中心(MCI)
管理和应用信息学

摘要

本文报告一项尚在进行的信息与通讯技术（ICT）课程发展计划，名为“*eCurriculum*”。本文根据近期的劳工市场数据，首先确定计划的目标，然后讨论课程蓝本中各个不同的发展步骤。根据 Porter 和 Millar（1985）的价值链模型（*value chain model*），访问了数目具代表性的酒店员工，调查蒂罗尔酒店业对 ICT 知识范畴的（再）学历要求，并将过程录音。获得的研究结果用以建立初步的课程蓝本。

关键词： 课程发展 电子旅游 再培训 酒店业

Introduction

Information and communication technologies (ICT) create new markets, cause new forms of customer relationship (e.g. experiential marketing, eCRM, etc.) and support the optimization of (e.g. tourism) business processes (Werthner & Klein, 1999). However, in order to really achieve competitive advantages from this technological progress, tourism jobholders should feature adequate ICT knowledge, which, in turn, implies corresponding schooling/training offers and a continuous adjustment, upgrading and even the deletion of existing tourism curricula (Collins & Buhalis, 2004). The paper on hand gives a thorough account on an ongoing Austrian tourism curriculum development project, called *eCurriculum*. It intends to develop adequate eTourism curricula and learning methods (i.e. eLearning) to prepare and enable both students and employees for their IT-based work in the hotel sector (Vogal & Klassen, 2001). The paper is structured as follows: After giving a brief overview of curriculum development trends in tourism the need for ICT-related curricula development projects in tourism will be corroborated. Chapter two introduces the ICT curriculum development project for the hotel industry, called *eCurriculum*. In particular, it highlights the various objectives of the project and discusses secondary-data which empirically justify the endeavour. Chapter three summarizes the empirical results of three preparatory studies and is leading to a first version of an eTourism curriculum *prototype*. Based on the *task-technology fit* approach (Dale et al. 1995) and on Porter & Millar's (1985) *value chain model*, chapter four demonstrates an adaptation procedure to relate the curriculum prototype to the specific (re-)qualification requirements of the Tyrolean (Austria) hotel sector. Several elaborated ICT training modules for different (i.e. data-driven) educational target groups within the hotel sector are presented and discussed. Finally, after having summarized the main findings with respect to policy implications, the conclusion section outlines the future research agenda of the *eCurriculum* Project.

Background and aim of the Curriculum Project

2.1. Curriculum development trends in tourism

In his seminal article, Tribe (2001) critically points out that existing curriculum proposals in tourism are predominantly based on the *scientific-positivistic* approach (Koh, 1995). He concludes that these may have only limited application because of their lack of attention to tourism stakeholders' hidden meaning and values. Thus, he suggests two additional approaches to curriculum design. The *interpretative* approach regards "all relevant participants in the curriculum-event as subjects, not as objects" (Grundy, 1987, p. 69), while the *critical* approach supports "emancipation from status-quo and orthodox tourism curriculum" (Tribe, 2001, p. 447). Based on Habermas' (1978) *theory of knowledge-constitutive interests* the latter approach avoids that individuals behave as "self-forming species by recognising their own capacity of authorship of history" (Young, 1989, p. 27). Similarly, Smith and Cooper (2000) observe an evolution of tourism curricular approaches by indicating the growing importance of behavioural autonomy and control for the learning individual (Figure 1).

Figure 1 The evolution of curricular approaches in tourism (Source: Smith & Cooper, 2000, p. 92)

From	To
Content based approaches	Process-based approaches
Subject matter important	Experience and learning important
Perfection emphasized	Emphasis on the growing process
Dictated and prescribed learning	Self-planning and self-direction
Scheduled sessions	Self-directed and planned time
Mass teaching	Development of individual programmes
Subject matter and skills	Growth in behaviour and attitude
Memory testing	Development assessments
Curriculum organizes subject-lines	Curr. achieves effective learning environment
Teacher-led approach	Student-led approach

To summarize, only the transmission of a complex of both professional, technical and intellectual skills and concepts through a variety of learning experiences would enable tourism students to compete successfully in tourism job markets, develop their career paths, seek additional levels of education, engage in “*life-long learning*” and contribute creatively to a multicultural working society (ibid, 2000; Fuchs, 2001a).

2.2. Labour market background of the *eCurriculum Project*

Although Tyrol’s (AUT) tourism industry is a huge *job generator* (e.g. in 2004 a total of 11% of the workforce was employed in tourism) the small-sized hotel sector shows also negative labour trends: (1) For instance, for 50% of hotel employees, average staff membership stands below ½ year. (2) Due to the high personnel turnover-rate labour productivity stands at 80% below all branches of economic activity (Bieger, 2005, S. 29). (3) In 2004 only 6% of total tourism workforce was enrolled in (still highly traditional) further-training courses like “Management & Marketing”, “Kitchen & Waiter-Service” and “Gourmet & Wine” offered by public-authorities (i.e. Berufsförderungsinstitut, Wirtschaftsförderungsinstitut). (4) A last critical trend is the fact that the Tyrolean hotel labour market is characterized by a continuous *brain drain* (Weiermair & Fuchs, 1996; Fuchs, 2001b). As the latter process is much more pronounced for young and highly qualified employees it can probably only be stopped by introducing attractive and new concepts of *human resource development*.

2.3. Core objectives of the *eCurriculum Project*

As with other service industries, also for the (e.g. alpine) hotel sector, one can observe an ICT-driven change from the resource-based view towards a *knowledge-based* strategy orientation (Fuchs, 2004). Consequently, the creation of innovative schooling and training offers for new vocational fields in tourism, such as for ICT, becomes vital (Werthner & Klein, 1999). Thus, the aim of the below presented *eCurriculum Project* is to support the tourism industry with their “*life wide and life long learning*” by working out adequate curriculum adjustments and extensions in the knowledge field of *eTourism* (Buhalis, 2003). The term *eTourism* reflects the “digitalization of all processes and value chains in the tourism industry by bundling together three distinctive disciplines”, namely (ibid, 2003, p. 77): *Business Management* (e.g. Strategy, Marketing, Finance, Human Resource Management, etc.), *Tourism* (e.g. Transport, Heritage, Hotel, Leisure, Travel, etc.) and *Information Systems and Management* (e.g. Information Systems, Telecommunication, etc.). In order to cope with this aim, *eCurriculum* empirically identifies the need for curriculum adjustment from the point of view of the various tourism *stakeholders* (e.g. the hotel management, personnel managers, employees, students, teachers, scientific experts). Doing so, most relevant learning matters and methods for the special knowledge-field of *eTourism* can be deduced from the obtained results (Bach & Milman, 1996; Kyoo, 2000). Finally, by the aim of interactive communication technologies these new topical areas will be transformed into prototypical teaching materials (i.e. *eLearning*) and put to test in the tourism education and training system.

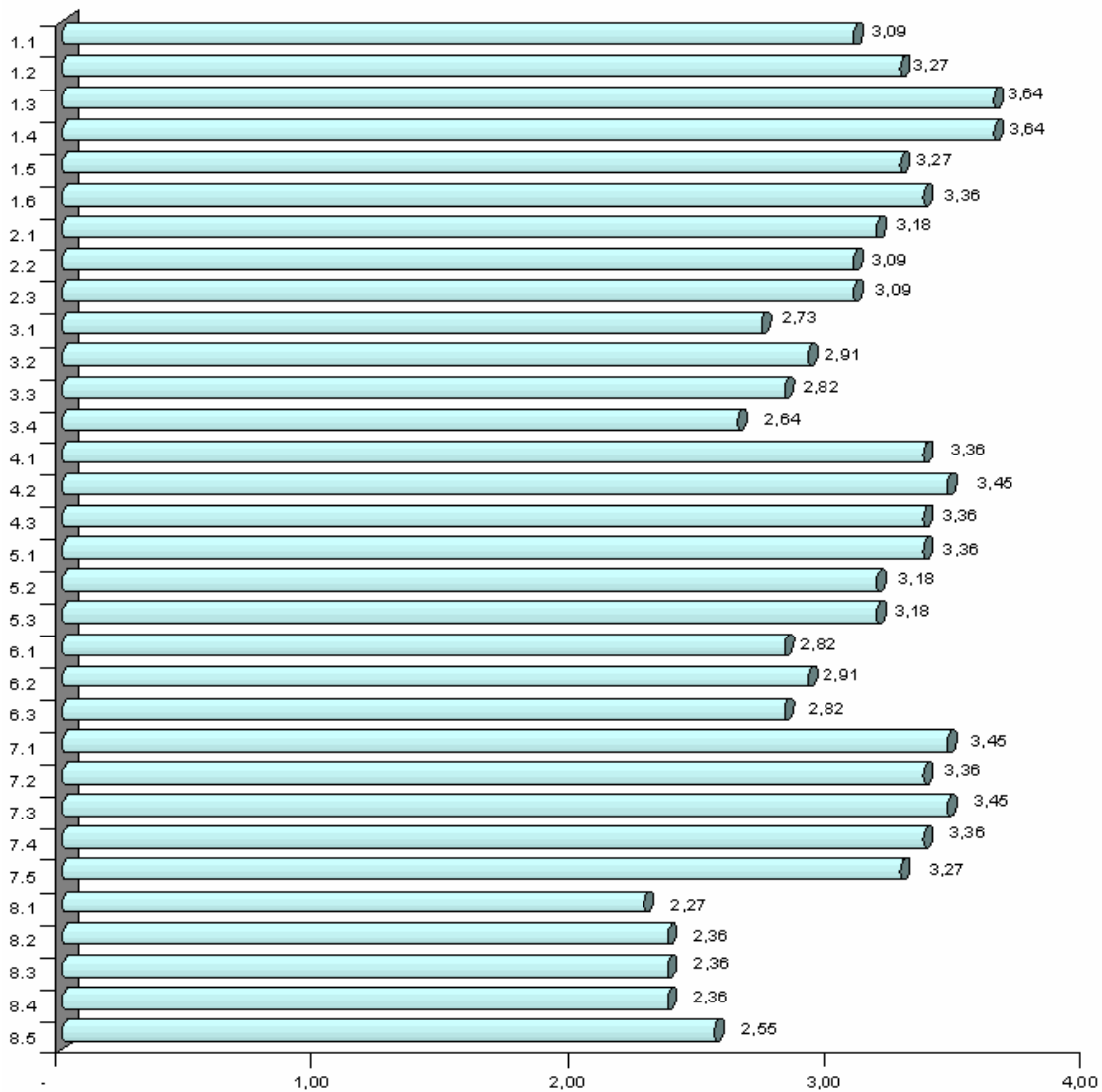
The project volume of the state-funded eCurriculum Project stands at 170.000 Euro. The project is co-financed by the Austrian university of applied research, the *Management Centre Innsbruck* (MCI) and has a total duration of 4 years (2004 – 2008).

Preparatory Study Results from the eCurriculum Project

In conformity with the curriculum development approach proposed by Kyoo (2000) the methodological starting point was to identify ICT-related qualification bottlenecks at the very general level as well as to delineate typical schooling/training patterns of hotel employees. For this aim an already existing survey conducted in Tyrol (AUT) in 2004 comprising 87 hotel owner-managers and 246 employees was consulted (Fuchs 2006). According to this the owner-managers' affirmation of ICTs' relevance to gain competitive advantages and, thus, their general disposition for future training propositions in the field of ICT could have been confirmed. In particular, it was possible to support the hypothesis concerning the increasing importance of "concept-specifically trained employees" as the majority preferred a "task/company-specific" type of ICT training (Bieger & Lehar, 1998). Although, on the other hand, 49% of the interviewed employees have in the past been enrolled in ICT related courses, the achieved improvement of handling ICT in the hotel company was judged as being highly insufficient. In particular the latter observation underpins the urgency for ICT curriculum development processes in tourism.

At the very beginning of the eCurriculum Project, an international "Screening" of already existing eTourism curricula and the used textbooks at the tertiary level (i.e. 50 universities as well as universities of applied sciences) took place. On the basis of these data, thematically related eTourism topics (e.g. *online marketing, construction, & evaluation of websites, booking & reservation systems, global distribution systems, etc.*) were identified and evaluated by 15 internationally well known university lecturers in the field of ICT and tourism (Werthner & Klein, 1999; Batey, 2002; Buhalis, 2003). The conducted semi-standardized interviews also allowed to identify additional curriculum topics, such as *content management, recommendation & push technologies, location based services*, as well as to explore an expert-based weighting scheme (i.e. 4 = absolutely important and 1 = absolutely unimportant) for the finally proposed 32 topical areas summarized in Figure 2.

Figure 2 Expert-based weighting scheme for eTourism curriculum topics



- **Topic Area 1:** 1.1 The importance of travel and tourism, 1.2 Definitions and classifications, 1.3 Structure of the tourism market, 1.4 Value creation chain, 1.5 Market transaction phases, 1.6 The specific role of information.
- **Topic Area 2:** 2.1 Importance of IT in tourism, 2.2 History & development of IT-applications, 2.3 Implications of IT-applications in tourism.
- **Topic Area 3:** 3.1 Hard- and Software Developments, 3.2 Network & Communication Technologies, 3.3 Information management and software development process, 3.4 Intelligent applications.
- **Topic Area 4:** 4.1 Strategic analysis: concepts and perspectives, 4.2 The interrelationship of IT, strategy and organization, 4.3 The impact of business strategy.
- **Topic Area 5:** 5.1 Tourism Suppliers (hotels/hotel chains, airlines), 5.2 Tour-operators & Destination Management Organisations (DMO, Local/Regional/National Tourism Organisation, Computer Reservation Systems CRS, Global Distribution Systems GDS, 5.3. Travel agencies and intermediaries.
- **Topic Area 6:** 6.1 eCRM (reservation systems, online recommendation and customization) 6.2 Customer integration (dynamic packaging), 6.3 Mobile Services

- **Topic Area 7:** 7.1 Managing business networks, 7.2 Planning/forecasting tools, 7.3 Management information systems, 7.4 eCommerce, 7.5 Frameworks of online Portals.
- **Topic Area 8:** 8.1 Website Design, 8.2 Website Framework, 8.3 Website key success factors, 8.4 Website Case-studies, 8.5 Website Evaluation

On the base of these initial studies, a first eTourism curriculum prototype version comprising learning objectives, learning levels, assessments (i.e. individual seminar- vs. group-work, etc.) and exam types (e.g. oral/written test, etc.) was generated. The final structure of the prototype, learning matters as well as core target groups are summarized in Figure 3.

Figure 3 Structure and learning matters of the eCurriculum Prototype

Topic	Learning Matters (exemplary)	Target group
1. Introduction to ICT & Tourism	Structure of tourism market and the role of information for various market transaction phases ICT and Management Information Systems (MIS)	Relevant for individuals with hotel and IT background at all educational levels
2. ICT & Tourism	Adoption rates & usage trends of ICT applications in tourism Productivity enhancement through ICT in tourism (Impact Studies), eCommerce/eBusiness in tourism (CRS/GDS)	Relevant for individuals with hotel and IT background at all educational levels
3. Strategic Tourism Management an ICT	ICT-supported strategy management (market segmentation, market share analysis, benchmarking, guest satisfaction analysis) Decision Support Systems concerning controlling, finance and pricing decisions Data Warehousing & Data Mining (OLAP) Electronic value chains (eAlliances, Smart Business Networks), Strategic ICT applications in tourism (eCRM, recommendation and push services, mobile services)	Relevant for individuals with hotel and IT background at the <i>tertiary</i> level
4. Information Technologies in Tourism	Network technologies (Inter-/Intranet), data encryption standards (<i>Secure Electronic Transaction</i>) Software architectures for CRS & DMS, data description techniques (<i>XML</i> , <i>UML</i>) & data-base modelling (<i>Entity Relationship Modelling</i>), advanced programming languages (<i>Java</i> , <i>Servlets</i>) & Cocoon frameworks, interoperability & interconnectivity (i.e. harmonisation, Ontologies and Semantic Web technologies) Creation, maintenance and evaluation of websites	Relevant for individuals <i>only</i> with ICT background at all educational levels
5. eSolution	<i>Hotel sector:</i> CRS & GDS, Property Management Systems, Enterprise Resource Planning Systems, eProcurement (Allegro, Fidelio, etc.) <i>Intermediaries:</i> Destination Integrated Computerized Information Reservation Management System (DICIRMS)	Relevant for individuals with hotel and IT background at all educational levels
6. Future eTourism Trends	Ambient intelligence, virtual communities, new market forms (e.g. online auctions, reverse auctions, etc.), hybrid-recommendation, context-sensitive push and pull technologies (e.g. location-based services), re-/disintermediation using agent-technologies	Relevant for individuals <i>only</i> with ICT background at all educational levels

In 2005, the developed curriculum prototype was evaluated by the human resource manager of the largest Tyrolean 5-Star hotel (i.e. 250 employees), by students of the university of applied sciences (i.e. the *Management Centre Innsbruck, Austria*) and by a group of 22 Austrian experts in the field of tourism research, ICT and pedagogy (Sigala, 2002; Brookes, 2002). To summarize, from this evaluation a comprehensive list of *strengths* (e.g. strong theoretical foundation, practical relevance, problem solving capacity, completeness, etc.) and *chances* (e.g. eLearning support, modularization, opportunity to supply as a further-training offer, etc.) has been deduced. However, also *weaknesses* (e.g. too little time to practice, too large technical focus, etc.) and even *risks* (e.g. barriers of acceptance by educational institutions, students, managers and the requirement for a continuous update, etc.) have been identified in the course of the conducted prototype evaluation (Maher, 2004).

The following main-chapter presents an empirical procedure to adapt the above elaborated curriculum prototype to the specific needs of the (Tyrolean) hotel sector for further-training purposes in the knowledge-field of *eTourism*.

E-Tourism curriculum for hotel sector specific training needs

The developed e-Tourism curriculum has yet (only) been evaluated by students, teachers and tourism experts at the post-secondary level (i.e. university of applied sciences). However, in order to minimize the observed barriers towards further-training within the Tyrolean hotel industry (see 2.2) and in conformity with the *interpretative approach* the aim of the following section is to record the specific qualification needs of the workforce involved in the *hotel business* (Grundy, 1987; Tribe 2001). Thus, an *online survey* conducted in February 2006 was targeted to both owner-managers as well as hotel employees. According to the *task-technology-fit model* (Dale et al., 1995) ICT-applications will only be adopted, when they effectively support the accomplishment of specific tasks in a pre-specified workplace setting. Therefore, the *task-technology-fit model* is generalizing that each organization shows a typical set of workplace-related ‘tasks’, which may be supported effectively by the intelligent adoption of new ICT-systems.

However, to ensure that data gathering concerning the hotel sector’s training requirement within the knowledge-field of ICT would be both valid and complete, a systematisation of company-specific task-areas should be arranged. For this purpose, the illustration of possible ICT application areas along the various task-areas of a typical hotel company bases upon Porter and Millar’s (1985) *value chain* model. The latter represents firm-specific activities as interlinked chain of value-adding processes. More precise, *primary activities* comprise ‘sales activities’ (i.e. the distribution of goods and services to customers), the ‘production of goods and services’ as well as the ‘delivery of after sales services’. In addition, *secondary (i.e. supporting) activities* include intra-plant functions, such as the ‘provision of resource-inputs within a pre-defined time period’, the ‘human resource management’, the ‘technology management’ to support both provision and processing of information and finally ‘infrastructure management’ regarding corporate facilities and facilitating goods (ibid, 1985; Buhalis, 2003; Bieger, 2005).

Based on the required competencies, capabilities and skills to successfully employ ICT in the hotel sector a total of 25 knowledge areas have been deduced (Werthner & Klein, 1999; Buhalis 2003) and clearly arranged below in Figure 4. By already anticipating first descriptive findings, figure 4 also displays (in parenthesis) both the *priority-ranking* as well as the corresponding *mean values* quantifying the potential demand for further-training courses in specific *eTourism* knowledge-areas.

Figure 4 *Value chain* model and ICT-knowledge areas (Source: adapted from: Porter & Millar, 1985)

Supporting Activities	Administration and Infrastructure	Mining customer data (1 st – 3.6) eCRM (6 th – 3.36) Acquisition and administration of customer data (10 th – 3.14) ICT applications protection and data security (11 th – 3.14) ICT-trends and their impact on tourism (12 th – 3.14) Yield management (16 th – 3.09) ICT supporting the capacity to promote innovation (17 th – 3.06) Software engineering (23 rd – 2.68) Data description techniques and data-base-modelling (24 th – 2.66)			
	Human Resource Management	ICT-based knowledge management (9 th – 3.19) ICT-supported personnel management (eHRM) (18 th – 3.0) eLearning (21 st – 2.77)			
	Provision of Information	Net-technologies (Intra-/Extra-/Internet) (5 th – 3.37) ICT-supported strategic tourism-management (8 th – 3.21) Interoperability & interconnectivity (13 th – 3.13) ICT- based business intelligence and decision support systems (14 th – 3.12) Creation and maintenance of websites (19 th – 2.89) Evaluation-framework and -technologies for websites (20 th – 2.79) Tourist information provision with means of mobile devices (22 nd – 2.77) Structure and functionality of destination management systems (25 th – 2.24)			
	Primary Activities	Sales & Marketing	Logistics	Service Production	After Sales Service
	Electronic distribution systems (CRS/GDS, etc.) (7 th – 3.25) ICT-based marketing (15 th – 3.09)	Data Warehousing, PMS, Enterprise Resource Planning (3 rd – 3.41)	ICT-support for the provision of tourism services (2 nd – 3.52)	ICT-support in after sales services (4 th – 3.4)	

Research design

Stäudel (1988) defines *competence-levels* as the “subjective assessment of own capabilities being at one's command to cope with a specific problem” (ibid, 1988, p. 4). According to Aizen and Fishbein's (1980) *theory of reasoned action* a ‘self-assessment’, in turn, results from a subjectively perceived importance level (e.g. attached to a specific knowledge area) and the corresponding *intention* to behave. Based on these theoretical assumptions the interviewed individuals employed in the Tyrolean hotel sector were asked to quantify their ‘self-assessment’ concerning the above selected (i.e. 25) ICT-knowledge areas using a six-point *Likert scale* (i.e. 1 stands for *highly important* and 6 for *not important at all*). In addition, they were asked to assess their corresponding knowledge-level (i.e. 1 stands for *sufficient knowledge* and 6 indicates *insufficient knowledge levels*). A survey has been conducted in the Tyrolean hotel sector including 98 owner-managers and 118 hotel-employees. Data gathering took place in February 2006 by means of an *online-survey* targeting hotel-companies at the *three-, four- and five-star* category-segment (Wilson & Laskey, 2003). In order to quantify hotel-specific further-training needs a *GAP-Value* (Parasuraman et al., 1985) was calculated by deducing the ‘self-assessed importance level’ from ‘self-assessed knowledge’. The emerging *GAP-variable* ranges from –5 to +5. More precise, negative values represent a too high knowledge-level compared to the declared importance (i.e. an overinvestment in *human capital*) whereas *zero-values* show a balanced importance/knowledge-level (Becker, 2003). The closer the value moves towards +5 the greater the potential demand for further-training (i.e. insufficient knowledge for important task areas). As reported next, an (explorative) *factor analysis* and a *variance analysis (ANOVA)* on the base of these *GAP-variables* supported the identification of both new training modules in the knowledge-area of *eTourism* as well as the corresponding educational target-groups, respectively (Hair et al., 1995).

Empirical results

The obtained results, first of all, indicate a strong need for further-training with respect to all the proposed 25 ICT knowledge-areas along the hotel-specific *value chain*. More precise, for none of the considered knowledge-areas the average *GAP-value* stood below +2.31. At the aggregate level (e.g. for *all* test persons and *all* ICT-knowledge-areas) the corresponding mean value stood at +3.08. Generally spoken, the need for vocational ICT-training proved to be more pronounced with respect to *primary activities* (i.e. +3.40). However, also for those *supporting activities* pertaining to ‘Mining customer data’, ‘eCRM’ and ‘Net-technologies’ relatively high *GAP-values* were observed (see Figure 4). In contrast, the hotel sector workforce experiences relatively low qualification needs towards predominantly technology-oriented knowledge-areas (e.g. data description technologies). Moreover, based on the 25 *GAP variables* the high-dimensionality of the corresponding hotel-specific ICT knowledge-areas could be reduced to two factors by the use of a *factor analysis* (Figure 5).

Figure5 Factor analysis results showing two-dimensions of ICT knowledge-areas for the hotel business

	Factor 1 Core ICT-Applications	Factor 2 Tech. Infrastructure
<i>Eigenvalue</i>	18.3	1.08
<i>Cronbach Alpha (α)</i>	0.987	0.961
ICT-based marketing	.830	
Electronic distribution systems (CRS, GDS, online Platforms)	.827	
ICT-support in after sales services	.818	
Acquisition and administration of customer data	.813	
ICT-supported personnel management (eHRM)	.807	
Mining customer data	.803	
eCRM	.799	
Yield management	.795	
eLearning	.782	
ICT-support for the provision of tourism services	.767	
ICT-trends and their impact on tourism	.753	
Data-Warehousing (PMS) & Enterprise Resource Planning (ERP)	.749	
ICT applications supporting the capacity to promote innovation	.705	
ICT-based strategic tourism-management	.670	
ICT-based knowledge management	.656	
ICT protection and data-security		.796
Software engineering		.783
Structure and functionality of destination management systems		.751
ICT-based business intelligence & decision support systems (DSS)		.718
Interoperability & interconnectivity		.717
Data description technologies and data-base-modelling		.666
Creation and maintenance of websites		.656
Tourist information provision by the means of mobile devices		.650
Evaluation framework and technologies for websites		.626
Net-technologies (Internet, Intranet, Extranet)		.614
Extraction Method: <i>Principal Component Analysis</i> Rotation Method: <i>Varimax</i> Total Explained Variance: 77.520% Sampling Adequacy: Kaiser-Mayer-Olkin = 0.974 Bartlett Test of Sphericity = 5544.742 (Sig. = .000)		

The two emerging factors showed a highly satisfactory *construct-reliability* as illustrated by the *Cronbach Alpha values* standing at 0.987 and 0.961. Also the measure for sampling adequacy (i.e. *Kaiser-Mayer-Olkin*) was highly satisfactory standing at 0.974 (Hair et al. 1995).

The first factor explains 73.2% of total variance and integrates all the five ICT competence-areas related to the ‘*primary activities*’ of the hotel *value chain* (Porter & Millar, 1985). However, it also comprises various ‘*supporting activities*’ such as eCRM, acquisition and

administration of customer data, mining of customer data as well as eHRM and ICT-based innovation and knowledge management. ICT here seems to similarly support strategic and operative hotel-processes at both the level of primary and secondary (i.e. *supporting*) activities, respectively. Thus, factor 1 was labelled "*Core ICT-Applications*". Interestingly enough, with the only exception of the 'eLearning'-item, all the remaining (i.e. 14) ICT knowledge fields loading on factor 1 show an above-average *GAP-Value* (i.e. > 3.08). Put differently, Tyrolean's hotel workforce is experiencing a common set of important '*core ICT applications*' which, on the one side, is fitting in form and content to provide attractive hotel services in the future. At the other side, however, the corresponding qualification needs are most pronounced (i.e. 'strongest'). In contrast, factor 2 shows an explanatory power of only 4.32% and comprises predominantly technique oriented knowledge-fields. Thus, it was labelled "*Technological Infrastructure*" emphasising the set of technical infrastructure-related applications (Buhalis, 2003). Here, only one factor-item, namely 'net-technologies' shows an above average *GAP-value*. Thus, to summarize, factor 2 has a less important significance.

Although with respect to both ICT qualification-factors no assessment differences between *owner-managers* and *employees* could be identified, highly significant differences (i.e. sig. = .000) exist with respect to factor 1 ('*Core ICT-Applications*') and the various hotel category levels. More precise, compared to 3-star hotels, the workforce within 4-star hotels experiences a stronger qualification need. The strongest need for further-training, however, was noted for employees in 5-star hotels. Similarly, only with respect to factor 1 significant differences (i.e. sig. = .000) exist between the various educational groups: Hotel employees with the degree of a vocational tourism school declare the strongest ICT qualification need. Finally, it could be identified (again only) for factor 1, that the sub-sample which was already enrolled in an ICT training shows a significantly stronger ICT-related qualification need.

In the course of the online survey test-persons were also asked to evaluate differing training methods (Airey & Frontistis 1997). The option that the '*Trainer comes to the enterprise*' was considered as adequate by 91% of the interviewed. Instead, the assessment towards '*Training in a training centre*' was judged as ideal only by 51%. Conducting further-training by means of '*eLearning*' has again been seen as adequate by 76% of the interviewed. Finally, the transfer of ICT-knowledge to the hotel work-force by means of '*Training on the job*' measures has been seen as adequate by only 59.3%. Interestingly enough, no differing assessments between owner-managers and hotel employees could be observed.

Conclusions and curricular implications

Based on the above results the prejudice that the work-force within the hotel-sector would show aversions towards further-training cannot be confirmed, as for none of the 25 ICT knowledge-fields a *GAP-value* lower than +2 could be realized (see again figure 4). As a result from factorial data-reduction, two main subject areas (i.e. '*Core ICT-Applications*' and '*Technological infrastructure*') were identified and should, thus, be 'packaged' and delivered in this form as new further-training product to satisfy the ICT-related qualification needs of the (Tyrolean) hotel sector. For the most attractive educational target-group within the hotel sector workforce the following *profile* emerged: (1) employed in the higher star-category, (2) secondary-degree skilled and (3) has already been enrolled in courses for ICT training. Finally, by means of the survey the composition of the elaborated *Curriculum prototype* could be confirmed as being adequate for both, formal education (i.e. schooling) and for vocational further-training. For the latter purpose, however, the following curricular topics as well as ICT applications should be granted highest priority:

- *Mining customer data* (mean *GAP-value* 3.6): Data mining is defined as the nontrivial extraction previously unknown, and potentially useful information from data. It involves the process of analyzing data to show patterns or relationships (e.g. market segments). Application modules can be easily obtained with Property Management Systems, such as *SAS Enterprise-Miner*, *Oracle-DarwinTM*.

- *ICT-support for the provision of tourism services* (mean *GAP-value* 3.52): Related ICT applications are reservation & room-management modules, check-in & guest history, accounting for services consumed by guests, interfaces to third-party systems as well as Point of Sales (POS) and *Restaurant Management Systems* (Buhalis, 2003).
- *Data-Warehousing & Enterprise Resource Planning (ERP)* (mean *GAP-value* 3.41): A data warehouse is a copy of enterprise transaction data specifically structured for *query, reporting and analysis*. A key factor of ERP is the integration of data from all aspects of the organization. Thus, ERP systems typically run on a single database instance with multiple software modules providing the various business functions, such as *Material Requirement Planning*, costing, accounting, etc.
- *ICT-support in after sales services* (mean *GAP-value* 3.40): Serves as important means to tailor marketing efforts to the customer and to support after sale services (e.g. first booker bonus, pricing offers, etc.). Basis for the management of contacts by means of data being stored in a customer database are integrated CRM systems.
- *Net-technologies* (mean *GAP-value* 3.37): The internet combines and integrates equivalently information, collaboration, communication, interaction and transaction. Thus, in contrast to traditional media, the trade-off between the number of attainable persons and information richness (i.e. accuracy, timeliness and customisation) disappeared. Lastly, *intra- and extranet systems* support all the productive areas of a company's *value chain* (Porter & Millar, 1985).
- *eCRM* (mean *GAP-value* 3.36): Significance derives from the insight that it proves far more expensive to acquire new customers than to close transactions with existing ones. Thus, the aim of CRM is to build-up and to maintain both long-lasting and profitable customer relations. eCRM conveys that approach to web-technologies and online-customers (e.g. *web-usage mining, web-content mining, etc.*).
- *Electronic distribution systems* (mean *GAP-value* 3.25): In tourism online distribution may be carried out through intermediaries by the means of *computer reservation systems (CRS), global distribution systems (GDS)* as well as through *online-platforms*. Direct distribution, however, occurs by means of the own hotel website (Werthner & Klein, 1999).
- *ICT-based strategic tourism-management* (mean *GAP-value* 3.21): Is the broad knowledge-area supporting to objectify firm-related decision making processes as well as to simulate the consequences of managerial decision processes and organizational adjustment (e.g. by the use of *agent technologies*).

Outlook

Future research aspects of the presented Austrian *eCurriculum Project* can be sketched as (1) the systematic elaboration and evaluation of “interactive case studies” to foster self-directed e-Learning (Lominé, 2002). Thereby, the advantages from *location and time-independency* as well as from the personalization of learning matters will show the strongest positive impact (Haven & Boterill, 2003; Gugan & Peacock, 2005). For instance, both learning matters and speed will be individually adapted to the learning behaviour as well as to the actual expertise level of the learning person(s). Furthermore, *eCurriculum* will realize (2) the development of approved certification standards to boost internationalisation (Black, 2004) and individual signalling strategies (Becker, 2003). Finally, *eCurriculum* will foster (3) the foundation of new business models to successfully deliver both ICT-related schooling and training measures to future jobholders in the (e.g. Austrian) hotel industry.

References

- Airey, D., & Frontistis, A. (1997). Attitudes to Carriers in Tourism: An Anglo-Greek Comparison. In: *Tourism Management*, 18(3), 149-158.
- Aizen, I., & Fishbein, M. (1980). *Understanding Attitudes and predicting Social Behaviour*. Englewood Cliffs: Prentice Hall.
- Bach, S.A., & Milman, A. (1996). A Novel Technique for Reviewing a Hospitality Management Curriculum. In: *Hotel and Tourism Educator*, 8(1), 37-41.
- Batey, J. (2002). Web Page Implementation within a First Year Undergraduate Module, in: *Journal of Hospitality, Leisure, Sport & Tourism Education*, 1(1), 51-60.
- Becker, G. S. (1993). *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education*, 3. ed, University of Chicago Press. Chicago.
- Bieger, Th., & Lehar, G. (1998). Touristische Weiterbildung im Spannungsfeld von unterschiedlichen politischen und wirtschaftlichen Interessenslagen am Beispiel Österreichs und der Schweiz, in: Weiermair, K./Fuchs, M. (Hrsg.), *RETTOURISM II*, 113-148.
- Bieger, Th. (2005). *Management von Destinationen*, 6.ed. Oldenbourg, Munic/Vienna.
- Black, K. (2004). A Review of Factors which Contribute to the Internationalisation of a Programme of Study, in: *Journal of Hospitality, Leisure, Sport & Tourism Education*, 3(1), 5-18.
- Brookes, M. (2003). Evaluating the Student Experience: An Approach to Managing and Enhancing Quality in Higher Education, in: *Journal of Hospitality, Leisure, Sport & Tourism Education*, 2(1), 17-26.
- Buhalis, D. (2003). *eTourism: Information Technology for strategic tourism management*, Prentice Hall-Pearson, Essex.
- Collins, C., & Buhalis, D. (2004). Enhancing SMTEs Business Performance through the Internet and Online Learning Platforms, in: Frew, A. (Hrsg.) *ENTER Information and Communication Technologies in Tourism*, Springer, New York, 580-591.
- Dale, L., & Goodhue, R./Thompson, L. (1995). Task-Technology Fit and Individual Performance, *MIS Quarterly*, 19(2), 213-236
- Fuchs, M. (2001a). *Theorie und Empirie der Bildungsnachfrage - Das Beispiel Tourismuswirtschaft*, Gabler, Wiesbaden.
- Fuchs, M. (2001b). Die Aus- und Weiterbildungsproblematik im Tourismus, in: Weiermair, K. et al. (eds.), *Vom Alten zum Neuen Tourismus: Beiträge aus Praxis und Forschung*, Universitätsverlag, Innsbruck, 58-68.
- Fuchs, M. (2004). Strategy Development in Tourism Destinations: A DEA Approach, in: *Poznan University Economics Review*, 4(1), 52-73.
- Fuchs, M. (2006). Arbeitsmarktliche Determinanten einer optimalen Humankapitalverwertung: Das Beispiel alpine Tourismuswirtschaft, *Aktuelle Institutsdebatten, Wissensbilanz 2005*, Institut für Unternehmensführung, Tourismus und Dienstleistungswirtschaft, Universität Innsbruck, 27-29.
- Grundy, S. (1987). *Curriculum: Product or Praxis*. Sussex, UK: Falmer.
- Habermas, J. (1978). *Knowledge and Human Interests*. London, Heinemann.
- Hair, J.F. Jr., Anderson, R.E., Tatham, R.L. & Black, W.C. (1995). *Multivariate Data Analysis*, New Jersey: Prentice Hall.
- Haven, C., & Boterill, D. (2003). Virtual Learning Environments in Hospitality, Leisure and Tourism: A Review, in: *Journal of Hospitality, Leisure, Sport & Tourism Education*, 2(1), 75-92.

- Koh, K. (1995). Designing the Four-Year Tourism Management Curriculum: A Marketing Approach. *Journal of Travel Research*, 33, 68-72.
- Kyoo, Y.C. (2000). Hotel Management Curriculum Reform based on Required Competencies of Hotel Employees and Career Success in the Hotel Industry. In: *Tourism Management*, 21, 473-487.
- Lominè, L.L. (2002). Online Learning and Teaching in Hospitality and Leisure: Myths, Opportunities and Challenges in: *Journal of Hospitality, Leisure, Sport & Tourism Education*, 1(1), 43-49.
- Maher, A. (2004). Learning Outcomes in Higher Education: Implications for Curriculum Design and Student Learning, in: *Journal of Hospitality, Leisure, Sport & Tourism Education*, 3(2), 46-54.
- McGugan, S. & Peacock, S. (2005). Learning Technology and its Potential to Support Student Placements in Hospitality and Tourism Education, in: *Journal of Hospitality, Leisure, Sport & Tourism Education*, 4(1), 15-29.
- Parasuraman, V., Zeithaml, A. & Berry, L.L. (1985). A Conceptual Model of Service Quality and Its Implications for Future Research, in: *Journal of Marketing*, 49(4), 41-50
- Porter, M., & Millar, V. (1985). How information gives you competitive advantage. *Harvard Business Review*, 63(4), 149-160.
- Sigala, M. (2002). The Evolution of Internet Pedagogy: Benefits for Tourism and Hospitality Education, in: *Journal of Hospitality, Leisure, Sport & Tourism Education*, 1(2), 29-45.
- Stäudel, T. (1988). Der Kompetenzfragebogen. Ein Verfahren zur Erfassung der Selbsteinschätzung der heuristischen Kompetenz, belastender Emotionen und Verhaltenstendenzen beim Lösen komplexer Probleme, in: *Diagnostica*, 34(2), 1 - 12.
- Tribe, J. (2001). Research Paradigms and Tourism Curriculum, *Journal of Travel Research*, 39, 442-448.
- Vogal, D., & Klassen, J. (2001). Technology supported learning: Status, Issues and Trends, *Journal of Computer Assisted Learning*, 17, 26-35.
- Weiermair, K., & Fuchs, M. (1996). Structural Labour Market Imbalances: The Case of the Tourism Industry, in: *Conference Proceedings, European Association for Evolutionary Political Economy, Work, Unemployment and Need: Theory, Evidence, Policies*, Antwerp, Belgium, Nov. 7-9, 1996, 2, 2-28.
- Werthner, H., & Klein S. (1999). *Information Technology and Tourism – A Challenging Relationship*, Springer, New York.
- Wilson, A., & Laskey N. (2003). Internet based marketing research, *Marketing Intelligence & Planning*, 21(2), 79-84.
- Young, R. (1989). *A Critical Theory of Education*. Hemel Hempstead, UK: Harvester, Wheatsheaf.