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MODERN ICT SOLUTIONS TO BE TAUGHT IN TOURISM AND HOSPITALITY EDUCATION: EVALUATION AND IMPLICATIONS

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ABSTRACT: While there are still short terms courses or one semester teaching on how to use software solutions for property management, technology continues with its rapid development. Introduction of cloud computing had a major impact on almost all sectors that are using ICT services and solutions. In tourism and hospitality industry cloud technology has made a revolution and moved their property management systems online.It is necessary for tourism educational institutions to include the lessons of ICT usage into their academic curriculum. This is considered as a possibility for students to learn about modern ICT solutions, accept changeable nature of it and get better preparation for the real business world. In this study, current program for teaching desktop solutions and ICT developments in tourism and hospitality were analyzed and compared with new, web-based solutions and teaching methods. Implications on how this topic might be useful for all interested parties in education process were derived.

Key words: Cloud computing, teaching ICT in tourism and hospitality, ICT practice

INTRODUCTION

According to Cohen (1997) technology-rich classrooms enable more fluid social interaction between teachers and students, making learning a more natural process. Technology enhanced education in classroom is still based on traditional teaching methods in terms of class meetings and faculty lectures. However, technology plays significant role inside and outside the classroom through Power point presentations, online material, computer simulations CD-ROMs, etc. When it comes to topic of teaching and learning usage of modern ICTs (information and communication technologies), it is still not implemented and realized in its full potential. It is based on overview and display of teaching materials and ideas usually involving passive communication with the students. Teaching in a more vivid and interactive environment can significantly increase satisfaction with the learning environment as well as interest in the topic (Nicholson et al. 2008).

To produce quality product and be competitive on the market, companies are recognizing the importance of high talented, knowledgeable, skilful and well motivated working force. Therefore these companies are trying to create environment which will allow employees to implement their knowledge and skills and, if necessary, companies will invest further in their employees' education. One of the reasons why company has to pay attention to the education and development of employees is due to development of information technologies and their application in the company (Krsak et al. 2014).

Researching management education as a category of professional education, Bhaumik (2012) stated that it has been influenced by technology both as a driver and as an enabler. Taking into consideration that in hotel industry Property Management Systems (PMS) software are playing a vital role in overall successful management of a hotel, it is therefore understandable the need and importance of including practical use of ICTs in tourism and hotel industry into faculty courses. In the first part of the paper new ICTs used in the tourism and hospitality industry will be presented. In continuation, example of teaching both desktop and web based systems used in tourism and hotel industry will be presented and analyzed. Important implications for all interested sides in education process will be derived as well. In conclusion, the suggestions for further planning of the academic programs regarding usage of modern ICTs in the sector will be proposed.

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MODERN ICTs IN TOURISM SECTOR

Usage of modern ICTs can become a facilitator in successful performance of every-day operations in hotels and also help travel agencies to struggle in the era of increasing usage of Internet in planning travel activities.

Success for some hospitality companies has been achieved, in large part, by taking advantage of information technology (Siguaw and Enz, 1999). While gathering valuable information about guests, PMSs are increasingly incorporating business intelligence tools to help hoteliers organize and make sense of these guest data. PMS helps hotels with keeping a more comprehensive record of its reservations, guest's information and enables better coordination between different departments in the hotel, as the record of important functions in hotel is also kept in this system.

Cloud computing is the contemporary technology that is being recognized by the IT industry as the next (potential) revolution that will change how the internet and information systems operate (Sharif, 2010). Computing is being transformed to a model consisting of services that are commoditized and delivered in a manner similar to traditional utilities such as water, electricity, gas, and telephony. In such model, users access services based on their requirements without regard to where the services are hosted or how they are delivered (Buyya et al., 2009). Cloud computing is being able to deliver this utility computing vision with its specific infrastructure from which businesses and users are able to access applications from anywhere in the world on demand (Buyya et al., 2009). Thus, the computing world is rapidly transforming towards developing software for millions to consume and, in cloud computing, business applications are exposed as sophisticated services that can be accessed over a network.

In the past, company needed at least three requirements in order to install one hotel management system: software, server and data base system. With cloud based PMS there is no need for large investments in software and hardware because "Cloud Servers" are always updated to latest technology. Cloud Servers work at a very low cost (in fact no investment cost) but a reasonable monthly subscription fee is usually charged. Simplicity of the cloud based property management system allows it to be productive. Cloud based PMS can operate on any advice that has a web browser and the companies are putting their efforts to make it even more user-friendly on smaller devices like tablets and smart phones.

Importance of teaching ICTs in tourism sector

Education in tourism should be more functional and offer expertise in a particular area of tourism sector. Considering tourism is a service-oriented field constantly changing towards the needs and requirements of the clients and markets, more specialized skills are required in the area of IT, marketing, planning, promotion activities etc. This should be valid for all enterprises and businesses in tourism sector, including travel agencies and hotels. With this kind of education, as defined by Dale and Robinson (2001), Functional Tourism Degree combined with Generic Tourism Degree and Product/Market Tourism Degree should be incorporated into body of knowledge in tourism.

Important determinant of tourism development on global level is a highly efficient information technology and its use. In the research of Krsak et al. (2014), they were examining the needs for additional training for employees of organization in the field of tourism in order to improve services provided to clients by their fully trained stuff. The results of the research, conducted among the providers of the services such as accommodation, catering and transport companies, information, cultural and social facilities and other tourism organizations, showed the high awareness of the need for the introduction of information technologies in tourism enterprises as a means of increasing the market share and the willingness of employees and their managers to further educate in the field.

In order to develop tourism education that will meet the needs of an expanding and differentiated global industry, there is a need for education program that will allow graduates to demonstrate good management skills and add value to organizations operating in tourism environment (Dale and Robinson, 2001). On classes of usage of ICTs in tourism and any other sector, students are able to meet with the practical terms and working conditions in the real sector. Being able to use the programs and software that are used in the real working environment means that student is able to solve some every-day operation tasks. Knowing the basics of IT sector

is always recommendable as this is the fastest growing and changing sector where everything that is newly used is based on the previously learned topics.

EXAMPLE OF TEACHING MODERN ICTs IN TOURISM SECTOR

In this paper, experience of teaching both desktop and cloud versions of the management programs used in tourism and hospitality sector are examined. The research was conducted in the Tourism Faculty at Akdeniz University in Antalya. Being known as Turkish Riviera, Antalya attracts millions of tourists every year. Therefore there are hundreds of hotels and significant number of travel agencies operating in this region. According to TUROFED (Federation of Turkish Hoteliers), in 2013, 51% of 5 star hotels in Turkey are being located in Antalya. Operating in condition of great competitiveness, providing quality, fast, on time service is crucial for hotels in differentiating from the other competitors. Akdeniz University Tourism Faculty is known for its successful cooperation with the tourism sector and as an institution that provides quality, competent and well trained students to work in the tourism sector in Antalya as well. This is partially due to the education program that includes both theoretical and practical teaching of modern ICT technologies used in tourism. After conducting interview with the teaching stuff and observing the education process for a two-semester period, the research was aiming to compare teaching of desktop and cloud based PMS versions.

Following the needs of tourism and hospitality industry in Antalya, Akdeniz University Tourism Faculty has included two programs, "Agency Automation" and "Hotel Automation", in its curriculum. These programs aiming to educate students on how to use hotel and incoming travel agency automation computer programs, are being taught for one year, divided in two semesters. For the hotel automation system, students are taught the basics of using most commonly used programs in hotel industry in Turkey (FIDELIO and ELEKTRA). After the course students will be able to independently work in the program in terms of performing basic front office operations –entering both individual and group reservation, check-in and check-out operations, room management and cashier operations, create all the necessary reports, etc. It is important to mention that both English and Turkish versions of the program are being taught during the course which is very useful for students as they are able to adopt the necessary terminology in both languages and get used to changes in the working programs which may be expected to happen in the real business world. After finishing the two-semester course on incoming travel agency program, students will be able to use new age agency automation program: make basic hotel, agency, flight and similar settings inside the system, enter hotel contracts and daily tour prices, make reservations records and changes of the same in different real time situations, performing flight, rent-a-car, transfer, accounting and other operations necessary for the successful functioning of travel agencies of modern age. Both desktop and web or "cloud" versions of the travel agency program are being taught.

FINDINGS

The main characteristics of two PMS versions and, according to them, derived advantages and disadvantages of the two types of systems are presented in Table 1.

Table 1. Advantages and disadvantages of teaching desktop and web versions of the PMS

Type of system	Advantages	Disadvantages
Desktop Version	• Used in majority of the tourism and hospitality companies • No need for Internet connection • Every user can set the program functions and design templates according to individual needs In case of error on one computer student can continue with the work on another one	• Harder installation of the system (for every computer individually) • Students can practice only when they have access to computer classrooms • Control of the tasks given lasts longer • Extra equipment needed for server
Cloud Version	• Access from anywhere at any time • Giving homework and doing the same is easier • Easier control of the given tasks by teacher • Longer practicing period • More user friendly interface • No need for installation because program is	• High Internet speed is mandatory • In case of lost of Internet connection there is no access to the system • In case connection when "server is lost" user does not have access to the system • In case of error in the system, it is present on all computers

	always ready to use and reach from the web No need for the additional server equipment	

Teaching this subject does not have only practical dimension but also theoretical one. Before going directly on the practical part of explaining the use of the management software, there is always a need to theoretically explain vocabulary and operations in the hotel or travel agency business.

IMPLICATIONS

Inclusion of modern ICTs into curriculum and teaching programs and courses will be beneficial for all interested groups in educational process: students, their future employers and educational institutions.

Students will broaden their perspective of overall business operations in tourism and hospitality sector. They will receive theoretical knowledge and gain necessary practical skills in handling property managements systems that are vital for successful performing of everyday business activities.

From the perspective of future employers, teaching modern ICTs allow them to recruit students that posses combination of generic and value-adding specialist skills. They are in constant need and search for well prepared and skilful working force, enhanced with knowledge about modern technologies and, most of all, fresh ideas. Usage of new technologies brought revolutionary and continuous changes in everyday business operations in tourism and hospitality sector. Due to this, companies in this sector became more flexible in offering their services according to needs of their customers. Therefore, they are in need of employees that are flexible and ready to handle changes in needs and requirements of the industry. Teaching and releasing university students with the knowledge about contemporary ICTs used in sector can be one positive step toward creating this kind of working force.

Universities need to encourage practitioners to participate more widely in consultative meetings on the future development of tourism education. This can be done by inviting practitioners to become members of course development committees, ask for their advice and guidance on necessary skills and emerging areas within tourism that require expertise. Through cooperation with the real business sector, universities can obtain valuable information about the trends in the sector and keep their programs up-to-dated for the future benefits of all three parties. Meeting people from the industry, that are doing real job in the manner how they were taught at university, allows students to perceive their course valuable because it enriches their knowledge. Practices will be ensured for the successful students where they will have a chance to work on jobs for which they were educated. With participation of the real sector courses will be tailored according to the needs of both learners and employers.

CONCLUSION

The higher integration of ICTs with the rest of the learning environment, the higher would be its impacts (Bhaumik, 2012). Not only should web based learning systems be included in teaching and learning process in order to increase overall success of the whole course, it is necessary for the students to be taught the use of a new web-based technologies that are already in use in a real time business operations in enterprises.

If following the statements that the three interrelating factors that affect the actual use of ICTs in teaching and learning process in classroom and beyond are institutions, resources and teachers (Mumtaz, 2000), therefore the main effort should be to animate subjects involved in planning the course or provide resources necessary for the successful performing of teaching-learning activities and processes.

Career paths in tourism are so wide and open, but not all students stay in the field. This is partially due to employment possibilities in the field. Therefore the more realistic and structured employment opportunities that are able to sustain students for a career within the tourism industry should be provided. If the path is not clearly defined this can de-motivate the students and discourage them from entering into industry. Clearer career guidance needs to be given before, during and after the completion of the student's tourism degree and opportunities for practical learning of modern ICTs need to be fully integrated into their courses. Institutions should also consider opening new specialized departments or, by following the innovations in the field, update the existing teaching curriculums that will concentrate on providing more effective and practical knowledge.

In this paper the overview of the two different technologies used in real business environment in tourism and hospitality industry is provided. Although web based version of the hotel and agency management program is still not that widely used as the desktop one, the speed with which modern human society accepts and implements modern technology in every day life can allow us to predict that this situation may change in a couple of years. Therefore, tourism educational institutions should create programs that follow the trends in development of modern ICTs and include teaching of "cloud" based management systems already used in the field. In this way, educational institution will be able to act proactively and respond to challenges that tourism sector will face in the future.

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