Using problem-based learning to teach tourism management students

L. Marinakou

IST COLLEGE – UNIVERSITY OF HERTFORDSHIRE, Greece

ABSTRACT

This paper aims at identifying the learning styles of tourism management programme students in Greece and the investigation of embedding problem-based learning (PBL) via online activities in the assessment. There is need for degrees in tourism management programmes that will enable students to think critically. Tourism education and training is required to adapt to patterns of change which seem certain to exert a profound influence on future roles and behaviours, since the vocational aspect of learning and teaching has been criticised. In order to understand the students' learning style and behaviour it is important to develop learning and teaching strategies that enhance the student experience. The author has used Honey and Mumford's Learning Style Questionnaire (LSQ); even though it has been used widely in management training, very few studies using the LSQ however, have focused on hospitality and tourism. The results suggest that the students have a preferred style that poses challenges to lectures in understanding the students' learning behaviour as well as at developing their teaching strategy. The findings show that students prefer concrete learning styles, active and occasionally reflective. The authors suggest that an appropriate teaching method is problem-based learning with the use of online techniques to trigger the students' interest and give them the opportunity to reflect and practice the knowledge gained at the course. An example is discussed in the article.

INTRODUCTION

Hospitality and tourism are an applied area of study that depends on and draws from a wide range of disciplines. Tourism education and training is required to adapt to patterns of change which seem certain to exert a profound influence on future roles and behaviours (Simpson, 2001; Cooper *et al.*, 1992). The growth in the provision of tourism programmes of study has been extraordinary in the last ten years in the United Kingdom (Stuart, 2002) while the number of students in these programmes has risen by 42% in the period of four years (Huand & Busby, 2007; UCAS, 2005). This paper aims at exploring the learning style of tourism students and their response to the use of problem-based learning via online environments as a means of enhancing the teaching and learning experience.

1. THE LEARNING STYLE OF HOSPITALITY AND TOURISM STUDENTS

Teaching and learning approaches in hospitality and tourism studies has been widely researched in the last two decades. Many different models and approaches have been identified to explore the individual learning preferences of tourism students. There are many different terms used when defining and discussing learning styles and approaches. According to Keefe (1979 in Huang &

Busby, 2007:93) 'learning styles are characteristic cognitive, effective and psychological behaviours that serve as relatively stable indicators of how learners perceive, interact with and respond to the learning environment'. Tickle (2001:956 in Dale & McCarthy, 2006:49) sees learning style as 'an expression of personality within the academic context and as such it is said to include learning strategy, motivation, attitudes and cognitive style'. Therefore, the students' learning style influences the teaching methods and approaches. There are also different approaches to learning. For example, Kolb (1984) developed the Learning Styles Inventory, in which he identifies four stages in learning and specific abilities that are developed at the learning cycle through teaching.

Honey and Mumford (1986) developed the Learning Styles Questionnaire (LSQ) that offers a four-fold classification that is presented in the following table.

Table 1: Learning styles

Activists	Respond most positively to learning situations offering challenge, to include new experiences and problems, excitement and freedom in their learning.
Reflectors	Respond most positively to structured learning activities where they are provided with time to observe, reflect and think, and allowed to work in a detailed manner.
Theorists	Respond well to logical, rational structure and clear aims, where they are given time for methodical exploration and opportunities to question and stretch their intellect.
Pragmatists	Respond most positively to practically based, immediately relevant learning activities, which allow scope for practice using theory.

Source: Fry *et al.* (2007:20)

The above description shows a tendency towards the adoption of different styles based on the task, the time and the allocated effort (McGill & Beaty, 2001). Nevertheless, Kolb's learning cycle and Honey & Mumford's learning styles propose similar discernable styles that whatever the style teaching strategies should be sensitive to students' learning style preferences. Lashley & Barron (2006) also add that students should be aware of their own learning style so that can better understand their strengths and weaknesses.

Although, many have used this questionnaire to study students' learning styles, few have used this in hospitality and tourism (Barron & Arcodia, 2002). Recent studies however, suggest that students that study hospitality and tourism management exhibit preferences to practical activities. For example, Lashley (1999) and Barron & Arcodia (2002) claim that hospitality and tourism students are diverse, from different cultures and as Dale & McCarthy (2006) propose they bring their own skills and experiences when entering the higher education. Lashley (1999) and Barron & Arcodia (2002) suggest that hospitality management students prefer to learn from action-based situations, and as Lashley & Barron (2006) suggest they are challenged by new experiences. Moreover, activist students learn better with activities that include group work, but find it difficult "to learn when they have to take a passive role" (Barron & Arcodia, 2002:5). Honey & Mumford (2000) also add that these students are not keen on following precise instructions. In another study, in contrast, Wong *et al.* (2000) have found that Asian students show reflector-learning preferences, thus they prefer to undertake research and think about what they have learned. They prefer to learn through observation and find it difficult to learn from activities or do case studies. Barron & Arcodia (2002) found that students in Australia are predominately activist learners. This style has been explained by Lashley (1999) who proposes that hospitality and tourism students exhibit activist learning style due to the vocational and people-centered nature of the programmes of study. Honey & Mumford (1986) identified some drawbacks to the activist learning style, such as that these students avoid planning work in advance and neglect subjects that are not very interested in. Thus, they leave things the last minute and have difficulty in setting priorities. Finally, research conducted in Greece suggests that the traditional form of teaching and learning should be revised as the tourism students' learning styles have changed (Christou, 1999).

1.1 Problem-based teaching and learning

Although there is growth in the use of the Internet and problem-based learning, there is still limited understanding of how this works and helps students (Cranage *et al.,* 2006). Students in problem-based learning (PBL) take responsibility of their own learning by exploring the available resources to solve the problem posed to them; they construct their knowledge and they make connections between prior knowledge, experiences and newly acquired knowledge (Martin *et al.,* 2008). According to Loughran (2002:37) 'effective reflective practice involves careful consideration of both "seing" and "action" to enhance the possibilities of learning through experience'. He continues that reflection has been recognised as a valuable cognitive process and helps to conceptualise the practice setting. Reflection is recognised as a higher-order learning activity (Schon, 1983 in Biggs, 2003). Similarly, Kivela & Kivela (2005) advocate that PBL helps the students develop their critical and analytical thinking. Nevertheless, they claim that PBL requires prior knowledge, motivation and skills for self-directed learning. Martin *et al.* (2008:19) state 'PBL has been used, with great success, in a range of vocational curricula'. Research in the field of PBL has shown that students develop an improved attitude towards learning and higher level thinking skills is used for example critical analysis, problem solving and reflection (Heliker, 1994). Duncan & Al-Nakeeb (2006) claim that students demonstrated higher motivation, wider reading and critical thinking with PBL approaches. Kivela & Kivela (2005:440) state that PBL makes that students curious and 'stimulates them to search for information'. The learner autonomy has been linked closely to motivation and self-esteem that allows the students to feel valued and urge them to contribute to their group's exploration of the problem presented (Martin *et al.*, 2008). On the one hand, research has shown that PBL results in intrinsic motivation, nevertheless the 'degree of autonomy demonstrated by a student relies on the prior learning experience, attitude and knowledge of learning' (Dickinson, 1997 in Martin *et al.*, 2008:20; Kivela & Kivela, 2005). On the other hand, there is also evidence that extrinsic motivation is still high with PBL. Luddy (1998) claim that students were outcome-oriented since there is emphasis on performance rather than learning in education. He claims that the individual focuses on extrinsic motivation in order to cope with the time and the effort to perform tasks in PBL. However, Miller & Peterson (2003) in their study found that students may show frustration in managing and coping with group dynamics, as well as in managing the time and work required at PBL. In addition, McGill & Beaty (2001:12) suggest that 'action learning is based on individuals learning from experience through reflection and action'. They support the view that PBL is not dissimilar from action learning, and reflective learning in higher education is similar to action learning. They continue that action learning may blend with new technology in making more effective use virtual learning environments.

1.2 Online learning and teaching

Education is changing with the development of wider interest in the internet and the use of new technologies. The traditional teaching methods in higher education have been face-to-face delivery and paper-based distance learning (Dale & Lane, 2004), these methods have been criticised as poor learning methods (Keegan, 2007). Even though lectures are thought to be popular in higher education and the basic learning foundation for students they are also considered to have passive students participation and lack of feedback regarding the understanding of the lecture (Keegan, 2007). Additionally, Gibbs & Jenkins (1984) argue that students may constructively attend lectures for up to 20 minutes, thus interactive tasks may enhance student learning with variety. Pulakos *et al.* (2000) propose that interactive learning enhance the ability to respond effectively to the rapidly changing environment of work. Huxham (2005) claims that in her study students show that are against lectures by not attending them.

The development in technology has also penetrated higher education with the increasing use of virtual learning environments (VLES) (Dale & Lane, 2004; Dale & Lane, 2007; Biscomb *et al.*, 2008). The Joint Information Systems Committee (JISC) defined VLE as 'the components in which learners and tutors participate in online interactions of various kinds, including online learning'

(Weller *et al.,* 2005:253 in Dale & Lane, 2007:101). VLEs usually enhance student learning by encouraging discussion and online tasks (Dale & Lane, 2004) and they 'offer more stimulating learner experience' (Dale & Lane, 2007:101). This approach has benefited higher education institutions especially since the increase in numbers and class sizes. This increased number of students, the work overload as well as other elements such as the inadequate resources and funding create high levels of work-related stress to lecturers in higher education. This stress may be addressed with the use of technology (Biscomb *et al.,* 2008). Nevertheless, Dale & Lane (2007) claim that the use of technology and VLEs should be under rigorous evaluation.

The Internet has benefited a lot the teaching and learning (Zheng *et al.,* 2008). The main benefit from the use of technology is a saving of marking time, since the system may assess each answer and provide the students with a score. The technology allows the lecturer to analyse student progression and achievement in relation to each question or task separately. It also allows the use of digital images that are a better way for the human brain to store and recall them as opposed to text (Keegan, 2007). According to Williams *et al.* (1996 in Keegan, 2007) they are triggering a wide range of associations and they enhance creative thinking. Besides that the cognitive theory proposes that learning occurs when the learner processes selected material and integrates that with knowledge (Keegan, 2007), therefore images that are relevant to the content of the module may promote or even enhance effective learning. In contrast, other authors suggest that surfing the net or uploading notes do not lead to learning (Zheng *et al.,* 2008). They suggest that a systematic approach in the design of the tasks must be adopted. Additionally, Chou & Liu (2005) claim that students may feel isolated, frustrated, anxious and confused.

The level of students' knowledge and skills on the use of IT is an issue to be considered, even though most of the students are computer literate. The design and functionality of the VLE influences the engagement of the students (Dale & Lane, 2007). They continue that the students' engagement can be considered as a 'content plus support model'. On the one hand, Biscomb *et al.* (2008) claim that the use of online learning helps with testing theories and knowledge rather than for deeper forms of learning. On the other hand, Gibbs (1999) and Chou & Liu (2005) claim that they may encourage deep learning with the provision of feedback. Johnson (2005 in Dale & Lane, 2007:101) claims that reflective skills can be developed in VLEs as there is more time for the student to interact.

Lashley & Rowson (2005) claim that information technology is an important element in hospitality and tourism studies. Other studies, such as Sigala & Baum (2003) suggest that a challenge posed to hospitality and tourism graduates highlights the need of information literacy, knowledge management and interaction at VLEs. This has led to a change in the use of pedagogical models that are now used to foster collaborative learning communities. They propose that virtual hospitality and tourism universities will be established in the near future.

Byrne *et al.* (2002) and Lashley (1999) and Hsu (1999) suggest that in order to understand the students' learning style and behaviour it is important to develop learning and teaching strategies that enhance the student experience. Therefore, the students' characteristics and learning styles are critical for lecturers to understand and reflect on, since students bring different expectations to learning. In addition, students in hospitality and tourism should be prepared for the changes that occur in the industry and more importantly they need to learn how to learn (Christou, 1999). As Paraskevas & Sigala (2003) claim each student has his/her own learning style and lecturers should consider equally the learning styles in order to deliver their courses.

2. METHODOLOGY

The sample included students (N=55) at the BA (Honours) Tourism Management programme that are currently registered at the programme. All the students are Greeks. The college has been used as the researcher is employed there, and it has been offering the programme for 10 years. The students were given the LS questionnaire to study at home. Then they were required to assess their learning style considering their studies. The LSQ comprises of 80 questions that the students should state whether they agree with (v) or not agree (x) and then they had to calculate their result following the

instructions they were given. The process lasted 2 weeks in March 2011, and all the students were required to participate. Therefore, the researchers ensured that all students participate at the study in order to collect more data. The response rate was 100%, as the students coincided with the requirements of their programme of study. Although several models and measurement instruments have been developed to classify individual learning preferences, Honey and Mumford's Learning Style Questionnaire (LSQ) has been used widely in management training (Huang & Busby, 2007), but few have used it to study hospitality and tourism teaching and learning. Despite the suggestion by Berings & Poell (2002:57 in Lashley & Barron, 2006:555) that the 'LSQ has better reliability and better face validity than other instruments, but its construct validity has hardly been investigated' the authors used it to identify the learning styles of the sample. They believe that this tool helps at identifying the students' views and alternative to learning styles. The aim has been to identify the students' learning style so as to stimulate reflection.

Having identified the main students' learning style (Activist), the lecturers adopted the PBL concept and active learning through the use of the VLE. They designed the assessment of the module Tourism Geography field research (level 5) following the results of the study. All the information was uploaded on StudyNet, the university's online plartform. There are a variety of functions of this system such as uploading lecture notes, podcasts or assessment such as multiple choice questions, and discussion forums. Students may also upload information themselves. Some students engage with the VLE but others decide to just download information and lecture notes. Williams (1996 in Chou & Liu, 2005) suggests that the students in VLEs should have the opportunity to self-monitor their progress that may be done through practice assignments and discussions. Additionally, they should show self-efficacy to judge their capabilities after they have evaluated the programme and the assessment.

The lecturers also observed (overt observation) the students' progress via the monitoring system available at StudyNet. For this task, the students were asked to visit a tourism destination (Athens), collect data with observation and interviews and write a report to reflect on the resources available for the development of urban tourism. The purpose was to link the students' learning style with the various stages of the assessment, therefore to identify how tourism students learn better.

A set of teaching procedures and guidelines were provided to the students for the module in the module guide. The content was consistent with the university's programme and the assessment was both formative and summative. The lecturers acted as facilitators (McGill & Beaty, 2001) and encouraged the students to take responsibility for action in overcoming a problem. In the formative assessment as part of their final coursework the students were given a set of statistics on their chosen tourism destination and were asked to perform some statistical analysis which then they had to compare with the other members of the group and upload a draft report on the findings. The deep approach to learning (Biggs, 2003) was encouraged by asking them to search and use the main concepts on the module and comment on them. Each group also accessed the rest of the reports and they put their comments online for discussion. The comments made by the teams and the lecturer, were used as constructive feedback towards their final assignment. The lecturers were monitoring the procedure and the interactions both in the VLE and in the classroom and provided suggestions and directions when necessary. Additionally, the students could control the content, their pace of learning and towards the end a self-assessment marking framework was provided to give them the opportunity to evaluate their own work, knowledge and learning. The above agrees with Sigala & Baum (2003) who claim that online teaching should facilitate online learning and knowledge building. Therefore, students moved from being passive recipients of knowledge to participants in activities that encompass analysis, synthesis and evaluation. They were encouraged to be active learners, and as Sivan *et al.* (2000:381) claim that 'involves students in doing things and thinking about the things they are doing'. Therefore, triangulation of methods (LSQ, observation, online discussions) was used in order to have reliable and valid results in this study.

3. FINDINGS AND DISCUSSION

The frequency of learning styles is shown in graph 1.

Graph 1: Frequency of learning styles
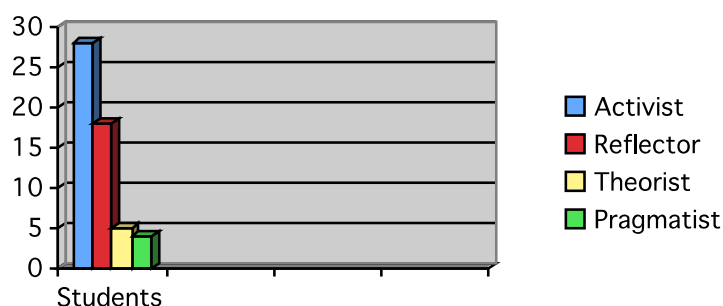
The findings show that 28 of the students (50.9%) are activists, 18 students (32.7%) are reflectors, 5 students (9.09%) are theorists, and 4 students (7.27%) are pragmatists. Students that are activists prefer to engage in practical experiences with hands-on activities (Dale & McCarthy, 2006). Additionally, they prefer the teaching style that is a reflection on their own learning approach. They work well in teams and they enjoy contexts with variety and situations difficult to predict (Lashley & Barron, 2006:564) that matches the hospitality and tourism environment. On the contrast, activists are thought to avoid planning, they rush into things and may leave things to the last minute and occasionally they have poor time management skills (Lashley & Morrison, 2000). Only 18 students are reflectors and therefore require more instructions in performing a task.

This task with the wide use of the internet provided the lecturers with more tools to foster student interaction, and provided more options to students to learn, depending on their learning style. Those who are activists and could not plan ahead were monitored and occasionally informed on their progress, thus they were encouraged to work more on their task. They also worked well with others. Those who are reflectors had the opportunity to do research and share the information and knowledge with other students. In this way, and as Felder & Spurlin (2005) propose, students in this study could acquire the skill to use the appropriate learning style as needed. There were only two students who seemed to have difficulties with the use of the internet and had negative attitude towards the task, that significantly inhibited them to participate in the online elements. Nevertheless, these students were in the same group with others who were more competent in this and contributed in other ways. This however, confirms Sigala's (2002) similar findings.

In their study, Silver & Brennan (1988 in Stuart, 2002:11) found that the majority of tourism lecturers appear to have been taking on a form of liberal vocationalism in their approach to delivering their courses. Similarly, Baum & Nickson (1998) claim that a practical education should develop to the students the skills to cope with employment. In contrast other studies emphasise the importance of balancing the vocational with the academic aspect of tourism studies (Inui *et al.*, 2006) and they claim that this approach prepares students who not only have the operational skills, but they also have the relevant academic knowledge on their field of study. Busby & Fiedel (2001 in Inui *et al.*, 2006) state that they have conducted a study on the coursework offered in tourism degrees and they have found that there is a strong vocational focus. The findings suggest that students were satisfied from their interaction with the lecturers and other students, as well as their access to material available on the module website. Satisfaction with the use of the internet has been linked with students' learning style in other studies (i.e. Novotny 2004). Although, as Sigala & Christou (2002) suggest, few teachers fully exploit the use of the internet in their teaching, in this study the internet has been widely used to transform and extend the pedagogical models used for teaching the content of the module. At this point the authors suggest that the lecturers good use of VLEs contributed to the success of this research. Sigala (2002) proposes that the role of the lecturer-

facilitator is important to avoid serious problems such as confusion with available information and other.

Thus, the authors suggest that teachers should plan their teaching and learning in a way that recognizes different student learning styles, and should provide them with the most appropriate educational practice to aid their learning. Sivan *et al.* (2000:382) propose that in active learning 'students acquire knowledge, skills and attitudes while being actively involved in the process of inquiry', therefore the activists (the students in the sample) may reflect what they have experienced via PBL and active learning. The results are consistent with other studies, such as Lashley & Barron (2006), Barron & Arcodia (2002) where hospitality and tourism students were found to be mainly activists, and some reflectors. Both types however, needed different assessment and teaching methods in order to learn. Those involved in this research engaged with student information and their learning styles as indicated by the LSQ, are able to adopt teaching and learning strategies that engage students.

4. CONCLUSIONS

The results suggest that students' learning should be considered when designing teaching and assessment. The findings suggest that hospitality and tourism students learn more effectively in VLEs even though it has been a novelty within the department. With appropriate guidelines the particular group of students developed the necessary learning strategies in order to perform well at the particular task, and they showed enthusiasm in the interaction and the discussion. Interestingly, those students expressed their satisfaction on the module evaluation and the positive affects this activity had on their learning. They also commented positively on the quality of the VLE, the easy access and use of the system. The above affirms the suggestion made by Hara & Kling (2000 in Chou & Liu, 2005:74) that 'technological proficiency and the ability to rely on the community of learners through learning tools have a positive effect on satisfaction'.

It is evident from this study that active learning with use of technology in hospitality and tourism programmes contributes to the development of critical thinking and problem solving and they give the opportunity to students to develop themselves as learners and it may be an effective path to help the students respond to the changes in the industry. Online collaborative learning has been widely used allows the instructor to use the tool in facilitating insight and understanding (Du *et al.*, 2007:95) rather that as 'one way dispenser of knowledge'. Nonetheless, concluding it is suggested that a blending approach of both online learning and teaching as well as with traditional practices may be the most effective approach in the hospitality and tourism education.

5. LIMITATIONS

The significant limitation of this study is that the sample may be considered small. Other academic institutions should be used in order to explore tourism students' learning styles. In addition, all the students are Greek, therefore, there may exist differences based on culture or even gender that has not been included in this study.

REFERENCES

Barron, P. & Arcodia, C. (2002) Linking learning style preference and ethnicity: international students studying hospitality and tourism management in Australia. *Journal of Hospitality, Leisure, Sport and Tourism Education* 1(2), 15-27.

Baum, T. & Nickson, D. (1998) Teaching human resource management in hospitality and tourism: a critique. *International Journal of Contemporary Hospitality Management* 10(2), 75-79.

Biggs, J. (2003) *Teaching for quality learning at university*. 2nd ed. Buckingham: Open University Press.

Biscomb, K., Devonport, T.J. & Lane, A.M. (2008) Evaluating the use of computer-aided assessment in higher education. *Journal of Hospitality, Leisure, Sport and Tourism Education,* 7(1), 82-88.

Busby, G. (2001) Vocationalism in higher level tourism courses: the British perspective. *Journal of Further and Higher Education* 25(1), 29-43.

Byrne, M., Flood, B. & Willis, P. (2002) Approaches to learning of European business students. *Journal of Further and Higher Education* 26(1), 19-28.

Christou, E. (1999) Hospitality management education in Greece: an exploratory study. *Tourism Management* 20(6), 683-691.

Chou, S.W. & Liu, C.H. (2005) Learning effectiveness in a web-based virtual learning environment: a learner control perspective. *Journal of Computer Assisted Learning* 21(1), 65-76.

Cooper, C., Scales, R. & Westlake, J. (1992) The anatomy of tourism and hospitality educators in the UK. *Tourism Management* 13(2), 234-242.

Cranage, D., Lambert, C.U., Morais, D. & Lane, J.L. (2006). The influence of learning style on hospitality and tourism students' preference for web assignments. *Journal of Hospitality and Tourism Education*, 18(4), 18-26.

Dale, C. & Lane, A.M. (2004) Carry on talking: developing ways to enhance students' use of online discussion forums. *Journal of Hospitality, Leisure, Sport and Tourism Education* 3(1), 53-59.

Dale, C. & Lane, A.M. (2007) A wolf in sheep's clothing? An analysis of student engagement with virtual learning environments. *Journal of Hospitality, Leisure, Sport and Tourism Education* 6(2), 100-108.

Dale, C. & McCarthy, P. (2006) I like your style: the learning approaches of leisure, tourism and hospitality students studying generic modules. *Journal of Hospitality, Leisure, Sport and Tourism Education,* 5(2), 49-58.

Du, J., Durrington, V.A. & Mathews, J.G. (2007) Online collaborative discussion: myth or valuable learning tool. *MERLOT Journal of Online Learning and Teaching* 3(2), 94-104.

Duncan, M.J. & Al-Nakeeb, Y. (2006) Using problem-based learning in sports related courses: an overview of module development and student responses in an undergraduate sports studies module. *Journal of Hospitality, Leisure, Sport and Tourism Education* 5(1), 50-57.

Felder, R.M. & Spurlin, J. (2005). Applications, reliability and validity of the index of learning styles. *International Journal of Engineering Education,* 21(1), 102-112.

Fry, H., Ketteridge, S. & Marshall, S. (2003) A handbook for teaching and learning in higher education. 2nd ed. London: Kogan Page.

Gibbs, G.R. (1999) Learning how to learn using a virtual learning environment for philosophy, *Journal of Computer Assisted Learning* 15(3), 221-231.

Gibbs, G. & Jenkins, A. (1984). Break up your lectures: or Christaller sliced up. *Journal of Geography in Higher Education,* 8(1), 27-39.

Heliker, D. (1994) Meeting the challenge of the curriculum revolution: problem-based learning in nursing education. *Journal of Nursing Education* 33(1), 45-47.

Honey, P. & Mumford, A. (1992). *The manual of learning styles*. UK:Peter Honey.

Hsu, C.H.C. (1999) Learning styles of hospitality students: nature or nurture? *Hospitality Management* 18, 17-30.

Huang, R. & Busby, G. (2007) Activist, pragmatist, reflector or theorist? In search of postgraduate learning styles in tourism and hospitality education. *Journal of Hospitality, Leisure, Sport and Tourism Education* 6(2), 92-99.

Huxham, M. (2005). Learning in lectures: do interactive windows help? *Active Learning in Higher Education*, 6(1), 17-31.

Inui, Y., Wheeler, D. & Lankford, S. (2006) Rethinking tourism education: what should schools teach? *Journal of Hospitality, Leisure, Sport and Tourism Education* 5(2), 25-35.

Keegan, S.N. (2007) Importance of visual images in lectures: case study on tourism management students. *Journal of Hospitality, Leisure, Sport and Tourism Education* 6(1), 58-65.

Kivela, J. & Kivela, R.J. (2005) Student perceptions of an embedded problem-based learning instructional approach in a hospitality undergraduate programme. *Hospitality Management* 24, 437-464.

Lashley, C. (1999) On making silk purses: developing reflective practitioners in hospitality management education. *International Journal of Contemporary Hospitality Management* 11(4), 180-185.

Lashley, C. & Barron, P. (2006) The learning style preferences of hospitality and tourism students: Observations from an international and cross-cultural study. *Hospitality Management* 25, 552-569.

Lashley, C. & Morrison, A. (2000) (eds) In search of hospitality: theoretical perspectives and debates. Oxford: Butterworth-Heinemann.

Lashley, C. & Rowson, B. (2005) Getting IT right. Exploring information technology in the hospitality curriculum. *International Journal of Contemporary Hospitality Management* 17(1), 94-105.

Leslie, D. (1993) Higher education for hospitality and tourism: a European dimension. *International Journal of Hospitality Management* 12(1), 101-107.

Loughran, J.J. (2002) Effective reflective practice: in search of meaning in learning about teaching. *Journal of Teacher Education* 53(1), 33-43.

Luddy, F. (1998) It's not what you do: what is the link between academic success and learning style? *The Psychologist* 11(1), 545.

Martin, L., West, J. & Bill, K. (2008) Incorporating Problem-Based learning strategies to develop learner autonomy and employability skills in sports science undergraduates. *Journal of Hospitality, Leisure, Sport and Tourism Education* 7(1), 18-30.

McGill, I. & Beaty, L. (2001) Action learning a guide for professional, management and educational development. 2nd ed. New York: Routledge.

Miller, C.K. & Peterson, R.L. (2003) *Cooperative learning*. 2nd ed. Safe and Responsive Schools. USA: University of Indiana.

Moira, P., Milonopoulos, D. & Anastasiou, S. (2004) Producing graduates for the tourism industry in Greece: a case study. *Journal of Hospitality, Leisure, Sport and Tourism Education* 3(2), 55-60. Available at http://dx.doi.org/10.3794/johlste [Accessed: 9 July, 2008]

Morgan, M. (2004) From production line to drama school: higher education for the future of tourism. *International Journal of Contemporary Hospitality Management* 16(2), 91-99.

Morrison, J. (2004) Where now for Problem-Based learning? *The Lancet* 363 (9403), 10 January 2004, 174.

Novotny, E. (2004). I don't think a click: a protocol analysis study of use of a library online catalog in the internet age. *College and Research Libraries*, 65(11), 525-537.

Paraskevas, A. & Sigala, M. (2003). Teaching hospitality and tourism management: a matter of style. *Journal of Teaching in Travel and Tourism*, 3(4), 1-19.

Pulakos, E.D., Arad, S., Dovonan, M.A. & Plamondon, K.E. (2000). Adaptibility in the workplace: development of a taxonomy of adaptive performance. *Journal of Applied Psychology*, 85(4), 614-624.

Raffe, D. (1994) Modular strategies for overcoming academic / vocational divisions: issues arising from the Scottish experience. *Journal of Education Policy* 9(2), 141-154.

Ramsden, P. (2003) Learning to teach in higher education. 2nd ed. Abingdon: Routledge Falmer.

Sigala, M. (2002). The evolution of internet pedagogy: benefits for tourism and hospitality education. *Journal of Hospitality, Leisure, Sport and Tourism Education* 1(2), 29-45.

Sigala, M. & Baum, T. (2003) Trends and issues in tourism and hospitality higher education: visioning the future. *Tourism and Hospitality Research* 4(4), 367-376.

Sigala, M. & Christou, E. (2002). Using the internet for complementing and enchancing the teaching of tourism and hospitality education: evidence from Europe. In K.W. Wober, A.F. Frew and M. Hitz (eds) (2002) *Information and communication technologies in tourism 2002*. Wien: Springer-Verlag.

Simpson, K. (2001) Evolution and tourism education – a multi-sectoral view. *Journal of Teaching in Travel and Tourism* 1(1), 3-16

Sivan, A., Leung, R.W., Woon, C. & Kember, D. (2000) An implementation of active learning and its effect on the quality of student learning. *Innovations in Education and Training International* 37(4), 381-389.

Stuart, M. (2002) Critical influences on tourism as a subject in UK higher educationQ lecturer perspectives. *Journal of Hospitality, Leisure, Sport and Tourism Education* 1(1), 5-18.

Uden, L. & Beaumont, C. (2006) Technology and problem-based learning. Hershey: Information Science Publishing.

University and Colleges Admissions System (2005) *Facts and figures*. www.ucas.co.uk

Wickens, E., Forbes, A. & Tribe, J. (2006) Listening, understanding and responding to leisure and tourism undergraduates. *Journal of Hospitality, Leisure, Sport and Tourism Education* 5(2), 4-13.

Wong, K.K.F., Pine, R.J. & Tsang, N. (2000). Learning style preferences and implications for training programs in the hospitality and tourism industry. *Journal of Hospitality and Tourism Education*, 12(2), 32-40.

Zheng, R., Perez, J., Williamson, J. & Flygare, J. (2008) WebQuests as perceived by teachers: implications for online teaching and learning. *Journal of Computer Assisted learning* 24, 295-304.