

A COMPARATIVE STUDY OF STUDENT LEARNING STYLES IN HOSPITALITY AND TOURISM MANAGEMENT: A HIERACHICAL PERSPECTIVE

Abstract

Within the context of the hospitality and tourism educational environment in Australia and the UK, this paper provides a comparative analysis of the preferred learning styles of students studying hospitality and tourism programmes. Specifically, it compares the learning styles of students studying in Scotland and Australia depending on the year level of study and as such it highlights the learning style preferences displayed by students at different stages of their educational experience. The paper concludes with a discussion regarding the importance of recognising the potential changes in learning style preferences as student's progress in their studies. The paper further concludes with discussion regarding the implications of such changes for academic staff.

Key Words: Comparative, Learning styles, Hospitality and Tourism Education, Scotland and Australia

Introduction

Understanding how individuals learn has been of academic interest for a number of years, however with current attention focussing on the importance of the knowledge society, the understanding of learning becomes more critical. Gold & Smith (2003:1) argue that learning is the key factor for survival, sustainability and competitive advantage at the level of the individual, the organisation and the nation. However understanding learning is not a straightforward process. Merriam (2001: 38) argues that the knowledge base of learning comprises a myriad of theories, models, sets of principles and explanations. This paper explores one aspect of learning from a cognitive perspective, by examining differences in the student learning process.

The context for the study is hospitality and tourism students studying in Australia and Scotland. This context was deemed to be of interest for several reasons. Firstly hospitality and tourism programmes appear to becoming more popular and continue to attract a large number of domestic students; secondly the student body is becoming more diverse in terms of age, ethnicity and background of students; thirdly it is a maturing field of study in both countries; and finally attention is being focused on improving efficiency and effectiveness of hospitality and tourism educational programmes.

The research aim is to highlight the changes in preferred learning styles depending on year level of two cohorts of students. Specifically, the paper will:

- explain the context of the study;
- provide a brief overview of learning theory perspectives, prior to examining different learning styles theories;
- explain the research process;
- explore the learning style preferences of hospitality and/or tourism management students in the UK and Australia;
- analyse differences in learning preferences on the basis of year level of study;
- discuss the implications for students and academic staff.

Context of the study

Since the early 1970's there has been a dramatic increase in the number of hospitality and tourism programs offered by universities in the UK and in Australia. Indeed a

rudimentary search of the Commonwealth Department of Education, Science and Training website (<http://www.dest.gov.au/highered/ausunis.htm>) found that of the 43 publicly funded universities in Australia, 29 offered hospitality and/or tourism programs at either undergraduate or postgraduate level. Added to this are at least five private providers who specialise in hospitality and tourism education at undergraduate and postgraduate levels. Undergraduate hospitality and tourism education in the UK commenced slightly earlier with the first Hotel and Catering degrees being launched in the mid 1960's and by 1997 the HEFCE (1998) found that some 28 universities in England offered hospitality management programs. In the UK the Council for Hospitality Management Education (CHME) indicate that they represent 27 universities offering degree level qualifications in Hospitality Management. The Hospitality Training Foundation (2002) indicated that around 3,500 students graduate from UK higher education establishments, with hotel and catering degrees each year (1998-2000). The Learning Teaching Support Network (Hospitality, Leisure, Sport and Tourism) (2004) published data, provided by the University and College Admission Service, indicates that the number of accepted students on Hospitality courses has remained fairly stable for the last 3 years at around 1,500 students. In Scotland there are currently seven universities offering programmes in the field of hospitality management (SHEFC, 2005).

While the majority of students studying hospitality and tourism management at publicly funded universities in the UK and Australia continue to be domestic; there is evidence that the student body is becoming more diverse (Hsu, 1996). As disciplines, hospitality and tourism management appear attractive to international students and draw a higher than average number of such students (Malfroy and Daruwalla, 2000; Khwaja and Bosselman, 1990). This popularity perhaps is due to the maturing of hospitality and tourism management as an area of study. In addition, the notion of a career in the hospitality and tourism industry is no longer seen as demeaning for international students (Zhao, 1991). This coupled with the rapid growth of the hotel and tourism industry in, for example, mainland China (Huyton, 1997, Yu, 1998) and Eastern Europe has encouraged students from countries with developing service economies to pursue hospitality and tourism education in western universities.

In addition, educational providers are facing a number of key changes that are focusing attention on efficiency in relation to delivery methods. New opportunities offered by information technology could facilitate major change in delivery of education, providing greater flexibility for learning (Litteljohn and Watson, 2004). At the same time attention is being drawn to improving the quality of student experiences by quality assurance agencies, with more attention being given to student centred learning (Rogers 2004). In relation to hospitality and tourism programmes, discussion regarding and changes to, the balance between generic business knowledge and sector specific skills in the curriculum at undergraduate level exist (Litteljohn and Watson, 2004). Other social changes relating to hospitality and tourism education include changing government funding policies that have influenced the nature of student experience. It is generally recognised that currently, many more students than in the past take on part time job commitments. It might be suggested that working during term time as well as during holidays, might influence their approach to learning. Thus it is contended that in light of these different influences affecting students' educational experience, it is considered that this environment is an interesting and relevant context in which to examine student learning. However, as previously stated, there are different perspectives that can be taken when researching learning. This next section of the paper summarises different paradigms of learning theories, prior to taking a cognitive perspective in examining learning styles.

Learning Theory Paradigms

Lee's (2004:82; 1996:83) schools of learning theory identify cognitivism, behaviourism, and humanism as three key learning theories. She argues that cognitive

learning can be equated with education and concentrates upon learning at the head level; behavioural learning can be equated with training and concentrates at the hands level and humanistic learning can be equated with development and concentrates at the heart level. To this structure, a fourth theory is added: Critical approaches to learning. While critical approaches do not describe mechanisms and processes by which people learn, they perform a valuable role in surfacing motives and the underpinning rationale for learning.

Cognitivist theories focus on the processes involved in learning, with an emphasis on how knowledge is acquired, stored, constructed and transferred. Cognitivist theories embrace Gestalt principles, in that individuals experience the world in meaningful wholes. A central feature of cognitivist theories is that individuals are seen as active players in the learning process. In contrast, the Behavioural paradigm adopts a reductionist stance with concern focusing on establishing processes of learning through behaviour. Behaviourist learning theorists assume that learning is the product of experience of and within physical and social settings with responsibility for learning being with the teacher. The Humanistic paradigm is concerned with learning through interaction with society. Humanistic approaches to learning trace their roots to the field of humanistic psychology and the work of Carl Rogers emphasizing the importance of self-esteem, motivation and self-development (McGuire, 2004:88; Knowles, 1998:89; Adesso, 1996:90). The core assumption underpinning the humanistic approach is that learning occurs primarily through reflection on personal experience. An appreciation of individualism and difference is central to humanistic learning approaches. Humanist approaches to learning place the learner at the centre of all educational endeavours.

Finally, within a critical theory paradigm, learning is seen as a subtle process for encouraging commitment to existing systems of production and control. It recognises the existence of powerful interest groups and sees learning as an important tool for advocating specific values and ideals in furtherance of economic exploitation. Individuals are encouraged to subscribe to current ideas and thinking, with differencing of views being discouraged and suppressed. Learning is relevant to the degree that it is related to the primary process of the organisation (Poell & Van der Krogt, 2003). Learning is interpreted as a vehicle for manipulating employees and persuading them to achieve organisational aims (Lahteenmaki, Toivonen, & Mattila, 2001). The role of critical theory in advancing learning is to challenge the centrality and necessity of the dominant views (Alvesson, 1992); to render visible the ways in which social inequality reflects inclusive existing public spheres (Fraser, 1994) and promote approaches in which differences are resisted in the interests of developing more equal relations (Reynolds, 2003). Within this paradigm individuals need to engage in critical reflection and examine underlying motives of learning.

As the main topic of this paper is to explore learning styles of students studying hospitality and tourism management, the cognitive paradigm has been adopted as being the most appropriate, although some discussion is given to the other paradigms in the concluding sections of this paper.

Cognitive Learning Theories and Different Types of Learning Styles

Cognitivist Theories of Learning emphasise the processes involved in learning, rather than the products or outcomes of learning. Both Harrison (2000) and Von Krogh et al. (1994) argue that traditional cognitivist approaches adopt a rationalist stance, viewing cognition as the processing of information and the rule-manipulation of symbols. In agreement, Good (1990) argues that cognitivists view learning as a reorganisation of the cognitive structure in which individuals store information. As indicated above, cognitive theories of learning embrace Gestalt principles. Blanton (1998) argues that our perception is broken up into organised wholes through our ability to organise data so that it makes sense.

Cognitive processes represent an important mechanism by which individuals adapt to their environment. In order to deal with and process the large volume of information and arrive at meaningful decisions, individuals develop highly structured cognitive schemas. Daniels *et al.* (1995) argue that schema act as simplifications, helping managers to overcome the limitations of short-term memory, when they search long-term memory for relevant information. Similarly, Sparrow (2000) maintains that cognitive schema serve as top-down or theory-driven aids, generated from experience and affecting a manager's ability to attend to, encode and make intelligent inferences from collected information.

Experiential learning theory concerns itself with the cognitive processing of experience involving in particular the elements of action, reflection and transfer. Experiential approaches are based on the premise that learning can be made more meaningful if it is grounded in the experience and context of the learner and that individuals learn more easily when engaged in active problem-solving (Holman, 2000). Similarly, Wilson and Beard (2003) argue that experience is the integrated process by which action and thought are brought together, creating an organic whole of continuity, process and situation.

The experiential learning cycle involves four learning stages: concrete experience, reflective observation, abstract conceptualisation and active experimentation. Concrete experience involves the individual partaking in a new activity from which learning can occur. Reflective observation entails watching or observing others and/or reflecting on one's own experiences of the activity. Abstract conceptualisation engages the individual in developing a theory to explain the observations and/or activity experienced. Finally, active experimentation involves the testing of such theories in a new situation. The model also acknowledges the important role played by different types of learning styles. Sadler-Smith *et al.* (2000) notes that Honey and Mumford's (1986) learning styles questionnaire arose directly from Kolb's experiential learning cycle. The four learning styles identified are: Activist, Reflector, Theorist and Pragmatist. Activists like to involve themselves in new practices and enjoy tackling problems by brainstorming. They appear to be easily bored and prefer to move from one task to the next as the excitement fades. Reflectors are more cautious and thoughtful and prefer to consider all possible avenues of action before making any decisions. Reflectors students prefer to learn through observation and benefit from the opportunity to think before acting. They appreciate the opportunity to undertake research before an activity and think about what they have learned. Reflectors find it more difficult to learn from activities where they are forced into the limelight, for example through peer presentations or role-playing. Similarly, methods of learning such as case studies may prove problematic for these students as they are not keen on undertaking a task without prior notice or sufficient information (Honey and Mumford, 2000). Theorists like to integrate their observations into logical models based on analysis and objectivity. They appear to enjoy the structure associated with sound theoretical frameworks. Pragmatists are practical, hands on people who like to apply new ideas immediately. They often get impatient with an over emphasis on reflection. It is argued that a wholly effective learner is proficient in all four styles.

Several criticisms have been levelled at experiential learning theory. Reynolds (1998) argues that it promotes an individualized perspective, neglecting the sometimes collectivist nature of learning. Wilson and Beard (2002) argue that by locating itself within the cognitive psychology tradition, experiential learning overlooks or mechanically explains and thus divorces people from the social, historical and cultural aspects of self, thinking and action. A third criticism by Thagard (1996) maintains that cognitive and experiential approaches neglect the role of emotion, reducing learning to a calculating, functional process.

It has been noted that there are at least 32 commercially published instruments being used by researchers and educators to assess the different dimensions of learning styles (Campbell 1991). When determining the appropriateness of choosing the Learning Styles

Questionnaire over another tool that measures learning style preferences, it is useful to reflect upon Curry's (1987) Onion simile. On analysis of all the available learning style questionnaires, she placed each in one layer of a three-layer system. She suggests that the three layers are like an onion. The first layer (or core) presents learning behaviour as controlled at a fundamental level by the central personality dimension. The middle layer centres on a theme of information processing dimensions. The outermost layer, influenced by the interaction of the environment, is based on the theme of instructional preferences. This model is built on further by the work of Sadler-Smith (1996) who argues for a holistic approach to learning styles, which encompasses learning preferences and cognitive styles. Learning preferences (autonomous, dependent, collaborative) are similar to the outer layer in the onion, while cognitive style relates to the core of the onion.

The Learning Style Questionnaire fits neatly into the middle layer of Curry's (1987) onion model. Marshall (1987) agrees with Curry's (1987) analogy and places the Kolb (1985) Learning Styles Inventory and the Honey and Mumford (1986) Learning Styles Questionnaire firmly in the information processing preference layer of the model. While there has been some criticism regarding the use of the Learning Styles Questionnaire for managers (Duff, 2000), it has been found that this tool is most appropriate to determine the learning style preferences of students, particularly those of diverse backgrounds (Anderson, 1995).

As recipients and participants in the learning process, individuals are in a key position to question, challenge and critique the principles and assumptions underpinning learning. It might be concluded that the learning approach adopted by students depends on both the sociocultural setting as well as the school milieu (Biggs, 1987). Students' approaches reflect their own attitudes, habits, abilities and personality, but also the demands made by the learning environment (Kember and Gow, 1990). Each student normally has a preference for a particular approach to learning but will modify or abandon that approach if an alternative approach is more suited to the learning task (Gow, Balla, Kember and Hau, 1996). Course syllabi, teaching methods and assessment all place constraints on the student and affect and influence the approach to learning taken (Sims and Sims, 1995).

In addition, the role of educationalists and course providers in the learning process is also important. While acknowledging that learning is ultimately the responsibility of the student, Dehler, Welsh, & Lewis (2001) argue that the task of the educator is to create a space in which learning can occur. Freire (1970) maintains that education is politically charged and either teaches the values of the dominant group or helps learners to reflect critically and take action to create a more equitable society. Giroux (1997) maintains that educational courses reproduce the values, social practices and skills needed for perpetuating the dominant social order.

Grey & Mitev (1995) argue that students are resisting learning anything, which they perceive as theoretical, impractical or irrelevant, preferring to learn specific techniques, which they see as useful, and mainstream management readily serves up a diet of such techniques. Both Linstead et al. (2004) and Salaman and Butler (1994) contend that many management schools have tended to propagate a view that managers value most practical techniques or methods that have direct or immediate application leading to a dumbing down of management theory to suit practitioners. Dehler et al. (2001) argue that management education has become overly reductionistic and simplistic in holding to notions of management as a set of content areas to be learned. Likewise, Cavanagh (2004) views the role of modern management education as to fill the mind of the student, without altering it and to arm them with a portfolio of self-help theories and prescriptive management guides.

Learning Style Preferences of Hospitality and Tourism Management Students

Several studies have been undertaken that attempt to identify the learning preferences of hospitality, tourism and travel Management students in the UK, Asia and Australia. The majority of these studies have utilised Honey and Mumford's Learning Style Questionnaire and the results of these studies will be summarised below.

In his study in the UK, Lashley (1999) found that the vast majority of students who were attracted onto hospitality management display preferred learning styles that indicate that they enjoy practical activity, but who are less comfortable with theorising and reflection. As such, these students display preferences for activist learning styles (Lashley, 1999). Indeed, it would have appeared that these students thrived on the challenges associated with new experiences and they were described as tending to "act first and consider the consequences later" (Lashley, 1999:181). Not surprisingly, students with activist learning style preferences learn most easily from activities involving group work that is exciting, challenging and quick to change. On the other hand, activists find it more difficult to learn when they have to take a passive role, not become involved or undertake solitary work. They are not keen on practising and do not enjoy the constraints of having to follow precise instructions (Honey and Mumford, 2000). Indeed, such was the propensity for these students to adopt activist learning styles, that strategies had to be designed and implemented in order to develop students studying hospitality and tourism programs in the host universities into more reflective practitioners. In contrast, it would appear that domestic students studying hospitality management, hotel and catering management, tourism management and travel and tourism studies at Higher Diploma level and above in various colleges and universities in Hong Kong, Singapore and Taiwan display preferences for Reflector learning styles (Wong, Pine and Tsang, 2000). It is contended that a reason that could influenced the learning style is the differing cultural approaches to education. This is supported by conceptual work by Chan (1999), who contends that Chinese history and Confucius philosophy has a major impact on learning styles of Chinese students.

In summarising, there are a number of significant issues which might challenge current models of effective teaching in hospitality and tourism management programs in universities that have implications for teaching and learning methods, curricula design and assessment strategies. Firstly, it is important to understand the learning style preferences of students studying hospitality and tourism management and to attempt initiatives that encourage students to adopt a more reflective, critical approach to their studies. Secondly, it is important to recognise the diversity that is currently common in university classrooms and attempt to recognise the preferred learning styles of students from different backgrounds. Equally, it is essential to nurture and encourage the use of more critical reflective learning, as opposed to developing academic, administrative and structural constraints that appear to discourage more reflective approaches and reward a more short term, activist approach.

Research Methodology

A variation of the Learning Styles Questionnaire designed by Honey and Mumford (2000) was used in this study to investigate the learning styles of domestic and international students studying hospitality and tourism management at a variety of tertiary education institutions in Australia and Scotland. The questionnaire was divided into two parts. The first section asked respondents to answer questions concerning age, gender, nationality, ethnicity and number of dependents. This section also asked questions that attempted to determine motivations for current area of study and reasons for choosing the particular university. The second section consisted of 80 questions relating to the four different types of learning styles as identified by Honey and Mumford (1986), namely activists, reflectors, theorists and pragmatists. Respondents were asked to identify on a six-point scale (0 = Strongly Disagree; 1

= Disagree; 2 = Disagree on Balance; 3 = Agree on Balance; 4 = Agree; 5 = Strongly Agree) their strength of feeling for each statement. This means of response differs from the original Honey and Mumford (2000) method of responding which involved respondents merely placing a tick to indicate if they agreed with a statement, or a cross to indicate that they disagreed with a statement. The employment of a scale adds to the sophistication of the responses as it allows respondents to present a more accurate measure of their feelings concerning each question (Lashley and Shaw, 2002). The imposition of an ordinal Likert scale on the previous Honey and Mumford yes/no type measurement will enhance the reliability of the data collected. By employing equal interval measurement, Goodwin (1995) argues that Likert scales allow respondents to express varying degrees of favourability towards a particular item, thus providing enhancing the accuracy of the overall measurement.

In order to achieve an optimum response, and to answer questions students may have had during the completion of the questionnaire, the questionnaire was administered in the controlled environment of formal class time and under the supervision of a tutor. Ticehurst and Veal (1999:138) describe this approach to a questionnaire survey as a 'captive group survey' and suggest that this method of questionnaire administration is expeditious and less problematic than in less controlled situations. It must however be stated that students participation in this research study in both Australia and Scotland was entirely voluntary and respondents were drawn from normal university classrooms and thus are representative of the cultural diversity that exists in contemporary Australian and Scottish higher education institutions.

The data collected from the second part of the questionnaire, which contained 80 questions on learning styles, were analysed, using SPSS, by the score mean of each type of learning style. This allowed the researchers to develop frequency tables and undertake cross tabulations. Due to the use of the Likert scale, an indication of likes and dislikes relating to learning styles was determined for each group of students. A purposive method of selection was used to determine the higher education providers used in the Australian aspect of this study and a selection of both private and public universities were chosen.

Respondent Profiles

In total, some 514 students from nine Australian institutions took part in the study. Seven higher education institutions in Scotland that offer hospitality and/or tourism management at bachelor level or above were invited to take part in the Scottish element of the study and all but one agreed. In total, 391 students from six Scottish institutions took part in the study.

The composition of the respondents was broadly similar in that female respondents outnumbered their male counterparts by at least two to one. There was a fairly even mix of the number of respondents in years one, two and three at undergraduate level; respondents studying at masters level comprised only 10% of the total number of respondents. The average age of both the Australian and Scottish sample was just over 22 years. The table below gives an overview of the institutions that took part in this study along with an indication of response rates:

Australia				Scotland			
University	Estimate Student Enrolment	Issued Q's	Useable Returns	University	Estimate Student Enrolment	Issued Q's	Useable Returns
Queensland	400	90	70	Strathclyde	300	150	140
Griffith	400	80	60	Glasgow Caledonian	200	120	103
Charles Darwin	200	25	21	Paisley	150	75	62
Edith Cowan	200	55	48	Napier	120	60	40
AIHS	300	50	44	Robert Gordon's	200	50	20
Blue Mountains	300	150	115	Queen Margaret College	60	30	20
ICTHM	300	50	37	Abertay	40	20	0
ICHM	300	100	86				
Victoria	400	50	33				
		650	514	Total		505	391

Results

Initial analysis of the results from this survey would suggest that both groups of students might be considered as reasonably well balanced with regard to their preferred learning styles (see chart 1 below). These results would therefore indicate that both groups of students are relatively comfortable adapting to a range of teaching methods and styles. It can however be seen that the learning style preference with the most disparity between the groups is that of Reflector. Indeed, from initial analysis it can be seen that the Reflector learning style preference is the most preferred learning style for the Scottish cohort, and the least preferred cohort for the Australian students. This result is important if one considers Lashley's (1999:185) assertion for the development of more "reflective approaches to study and management tasks" amongst students studying hospitality and tourism. Consequently this might indicate a reflective teaching culture evident in Scottish universities from which Australian educators might learn.

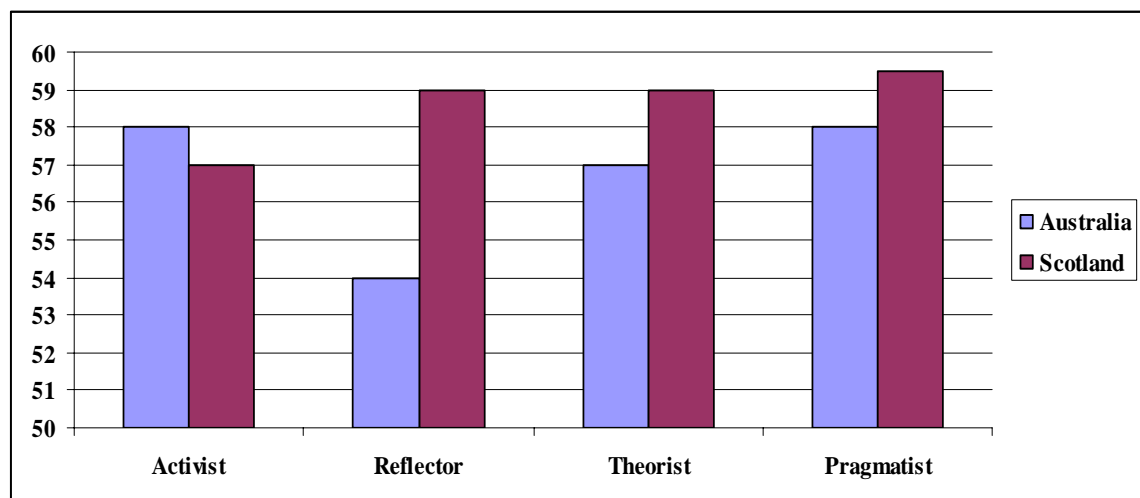


Chart 1: Mean Scores for all Respondents' Learning Style Preferences

It has however, been noted (see for example Barron, 2004) that it is unwise to treat a cohort of students as being one homogenous group. Indeed there is a danger in assuming that the preferred learning style of a group of students is representative of all major and minor sub groups within the cohort. For example, Chart 2 below presents an indication of the differences in learning styles of females and males in both the Scottish and Australian samples. This chart clearly indicates that within these major subgroups, there are differences in preferred learning styles. For instance it can be seen that among Australian males, the least preferred learning style is that of reflector.

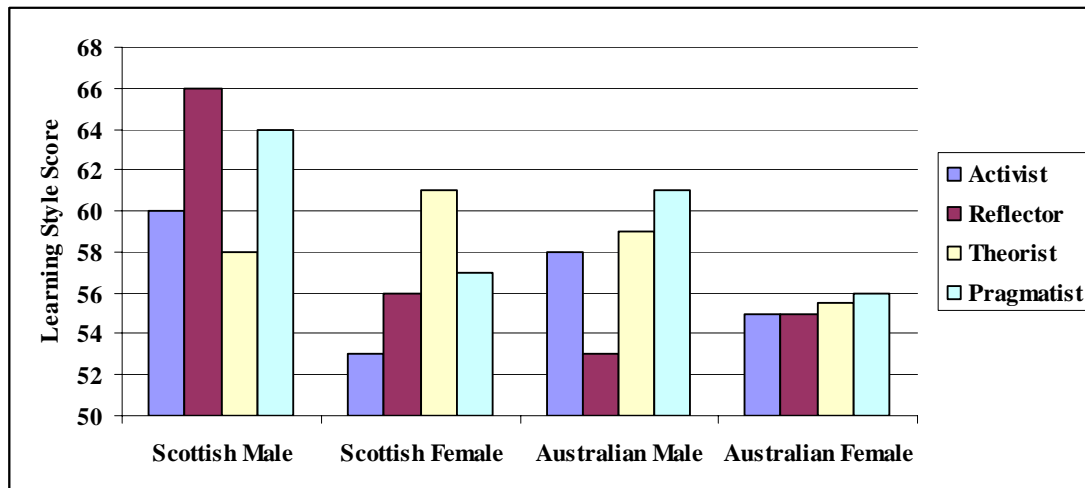


Chart 2: Learning style preferences by gender

Further analysis of the data comparing the preferred learning styles on the basis of year of study reveals some further interesting differences between the two countries. In relation to the Australian sample it can be seen that there is a developing reflector style learning preference through the four years of undergraduate programmes and also postgraduate studies. The preference for activist style learning would appear to decrease as students move through the levels of programme of study. These results may not be surprising as students are likely to be exposed to more opportunities to reflect in their studies, through for example, differing assessment instruments, greater use of case studies and opportunities to relate theory to practice. In addition, exposure to industry practice through work placements could also further develop reflection opportunities. With a decreasing emphasis on practical skills and more theoretical input into problem-solving situations, there is likely to be fewer opportunities for students to use and develop their activist learning abilities.

The chart below also indicates that theorising as a preferred learning style increases from first to second year, remaining virtually the same level in third year, but increasing dramatically in year four students. Although it is only possible to speculate reasons for the increase in theorising, possible influences include teaching methods and content that includes greater exposure to, and use of theory. A similar pattern of increased preference for pragmatic learning style, as students move through the four years of study can also be seen below in the Australian cohort. This increase in the preference for pragmatic learning makes for an interesting balance in relation to the reported preference for reflective learning. This could be related to teaching schedules, or assessment expectations, or it could be reflective of the students attracted to hospitality and tourism programmes.

In relation to post-graduate students studying in Australia, the reflector learning style was seen to be the most preferred, followed by theorist, and pragmatist. By far the lowest preferred learning style is activist. Interestingly, the reported extent of theorists and pragmatists is much lower at post-graduate level than year four students. This could be

influenced by age, profile of the student body and or content and delivery of programme. Without further analysis of the sample, it is difficult to put forward substantial reasons for this pattern.

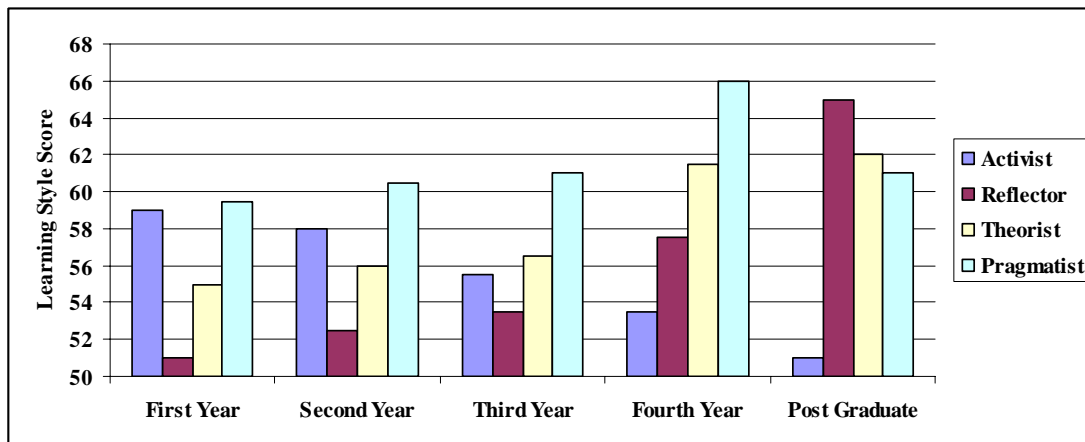


Chart 3: Australian student's preferred learning styles depending on year level

A different configuration emerges from the Scottish results. Although reflector learning is the most often reported preferred learning style within each level of study, the increase is between year one to year three, with a decline to the similar level as year one in year four. At postgraduate level, it has the highest mean level ($M=72$) and is greater than the Australian sample ($M=65$). These results can be seen to contrast to Lashley's (1999) work, which found that hospitality management students had a preference for activist learning, but were less comfortable with theorising and reflection.

The mean scores for theorising in the Scottish sample fluctuates between 55-61 across the four years, with the lowest reported level in year four. Although there is a slight increase in the preference for theorist learning moving from year one to year three, there is a subsequent decline in year four. The year four results could indicate an area of concern for Scottish institutions in relation to a perceived lack of preference for a theorising style of learning. It appears that current students either do not like, or are not given the opportunity, or are not able to demonstrate theorising learning skills. It might be expected that a theorising preference would be evidenced as students progress through a degree level programme, however this does not appear to be the case for the Scottish based students. These results could support the views expressed by Linstead et al (2004) concerning a focus on practical techniques, although the result merely highlights a lack of preference for learning through theorising, rather than a lack of theory underpinning their learning. The preference for pragmatic learning also increases between years one to three, but declines to its lowest level in year four. At postgraduate level, the Scottish results indicate that the preference for pragmatic learning is greater than theorising. This is in contrast to the Australian sample.

The preference for activist learning style is reported to be relatively popular across year one and two. It is particularly high with year three students, but declines for year four students. It is unclear why the degree of preference for activist style learning is so high in year three, of the Scottish based students but this could be related to work placement activities (which are often scheduled within year three of programmes of study), teaching and assessment methods that encourage activist learning, like group work, presentations or problem solving. In Scotland there are also many students articulating into year three from either Further Education colleges or overseas institutions. It is likely that these students have been exposed to different learning cultures and approaches that have influenced their learning style.

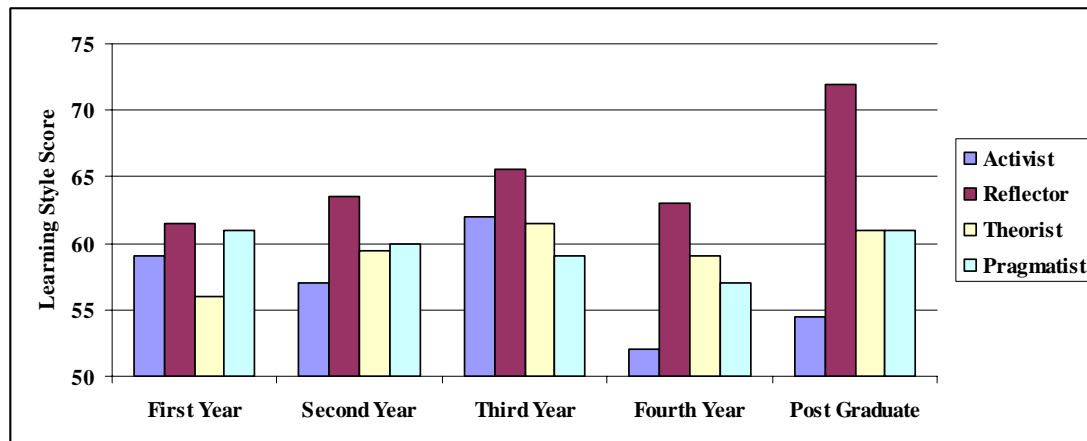


Chart 4: Scottish student's preferred learning styles depending on year level

In comparing the results of the Scottish and Australian samples, some interesting observations can be discussed. At an undergraduate level, the Scottish results indicate a lower preference for reflection, theorising and pragmatism than their Australian counterparts, but there is a greater preference for activist learning. This is in contrast to the initial analysis of the two groups taken as a whole entity, which reported a higher preference for reflection, by the Scottish students. These results contradict Lashley's (1999) findings and could be as a consequence of programme design issues, student profiles, learning environment and content issues discussed earlier.

In relation to theorising and pragmatic learning styles, again the Scottish cohort reports less emphasis on these as preferred learning styles than the Australian results. At post-graduate level the preference for theorising as a learning style increases to a mean of 59. When compared with the Australian cohort this is a lower reported preference across all years. At post-graduate level it appears that there is a stronger preference for activist and reflective learning styles reported by the Scottish than the Australian cohort, with a preference for learning through theorising being more prevalent in the Australian students than the Scottish. The reported preference for pragmatic learning is similar between the two samples.

Conclusion

While this research has addressed and achieved the overall research aim of this study, inevitably some limitations have to be taken into account. Firstly, there is a requirement for more detailed statistical analysis of the data which will allow more robust conclusions to be drawn. Similarly, this research has highlighted the need for the undertaking of a detailed analysis of the difference in content and process of hospitality education in Australia and Scotland. Finally, it is recognised that this research merely presents a snapshot of students' learning styles and the results cannot be seen to be indicative of learning style preferences in general.

This research has demonstrated that while there are some general similarities between students studying hospitality and tourism in Scotland and Australia, the composition of both cohorts presents a more complex picture. Through analysing the data based on gender and year of study, an understanding of the complex nature of student preferred learning styles emerge. In addition, this work highlights how an understanding of preferred learning styles might be taken into consideration when developing new subjects and programs, considering and implementing new teaching methods and, planning assessment strategies. For example, if educators are seeking to produce graduates who are measured in their decision making process and who take the opportunity to reflect on a range of options, then effort should be

concentrated in developing a more reflective approach among Australian male students and year four Scottish student groups.

The consequences of diversity amongst students' preferred learning styles presents lecturing staff with a number of challenges, particularly in Scotland with the reported dislike of learning through theorising. First amongst these is the ability to cope with such a variety of styles during the delivery and assessment of subjects. It might be suggested that the different learning style preferences as demonstrated within the two groups of students is an advantage and should be celebrated. The preference for reflector learning style by both the Scottish and Australian two cohorts, contrasts Lashley's (1999) work in this area. This result would indicate that students would be receptive to learning and assessment strategies that encourage a more reflective approach to their studies. With the Australian results indicating that students also enjoy theorising, this would support the introduction of a more critical focus for their studies. This might be more difficult to introduce in the Scottish institutions.

Viewed positively, hospitality and tourism educators might use these identified differences to the advantage of all students. This might be achieved by using alternative means of programme delivery that encourage students to theorise, including encouraging students to present summaries of theories, highlighting inconsistencies, greater use of case studies to develop critical and analytical abilities. Revising assessment strategies in order to develop a more reflective approach in students who display activist preferences or presenting more rigorously structured subjects to students who have reflector preferences. In addition, educators may find that where learning style preferences are concerned, students learn from each other and that simply encouraging diversity in, for example, group exercises will result in the development of more rounded approaches to learning.

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