Information and Communications Technology Skill Requirements for Hospitality Students

By

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Abstract

The Pacific International Hotel Management School (PIHMS) is a hospitality school that is located in New Plymouth, New Zealand and it offers a PIHMS Certificate in English, Diploma in Hotel Management, a Degree in Hospitality and a Post Graduate Diploma in Hotel Management. The Hospitality industry is very much like the Information and Communications Technology (ICT) industry as both are dynamic and growing fast (Watkins, 2005; O’Brien, 2002).

This report records the findings of an investigation into ICT skills that are required by PIHMS Diploma graduates to help give them a competitive edge when they apply for positions in hotels. In addition it recommends how PIHMS could teach any extra skills required by the hospitality industry.

The research used a mixed methods approach involving questionnaires, focus groups and interviews. The participants were interested parties that either have PIHMS graduates or students working for them or are lecturers at the school. There was also a comparison done of the PIHMS computing paper and a New Zealand Qualifications Authority (NZQA) computing paper that is offered in the New Zealand Diploma of Business (Level Six) throughout New Zealand in polytechnics and other tertiary institutions.
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Chapter One  Introduction

1.1 Introduction

This thesis records the findings of an investigation into the Information and Communications Technology (ICT) skills which are required by Pacific International Hotel Management School (PIHMS) Diploma graduates to help give them a competitive edge when they apply for positions in hotels. In addition, it recommends how PIHMS could teach any extra skills required by the hospitality industry.

Jennings (2001) has summed up the hospitality industry well when she states it “is only just emerging as a discipline in its own right” (p.4). This is similar to the Information Technology discipline which has now emerged into a very competitive and fast growing industry (O’Brien, 2002). Watkins (2005) states the hospitality industry is one of the fastest growing industries in the world and Boella (2000) says it is “one of the leading earners of foreign currency” (p.1). ICT is still one way organisations can gain advantage over competitors (Chapman & Corso, 2005). Of continuing concern are how many people actually know how to use these ICT tools and how much money is used to train employees to use these tools effectively (Wood & Brotherton, 2008).

The hospitality industry has a high employee turnover rate due to the unfriendly hours and the low wages that are paid (Robbins, 2005). This report may suggest some strategies for increasing employee satisfaction by training employees and giving them empowerment and status through having skills others in the hospitality industry do not have, which may also aid hospitality organisations to retain their employees longer (Scullard & Sugerman, 2009).

The research used a mixed methods approach involving questionnaires, focus groups and interviews. According to Cresswell (2003), the mixed methods
approach involves “both open and close-ended questions...multiple forms of data drawing on all possibilities...statistical and text analysis” (p.17).

1.2 Thesis Outline

The problem is that it is not entirely clear to PIHMS what ICT skills the hospitality industry feels it would be desirable for PIHMS graduates to have (R. Walker, personal communication July 20, 2007; L. Bridgeman, personal communication July 30, 2007).

The hospitality industry is very much like the ICT industry in that it is still very much in its infancy. This research reports on what ICT skills should be required for a graduate of PIHMS given that these students are portrayed as potential managers. The purpose of this research was to identify the ICT skills that industry thinks will give PIHMS students the qualifications that make them sought after. This research also investigates what selected Human Resource (HR) managers of hotels and PIHMS lecturers have to say about the ICT used in the hospitality industry.

The findings describe the outcome of the questionnaires, focus groups and the interviews that were carried out in the research over a four month period. The findings also include a section which compares and contrasts course guidelines for ICT from the New Zealand Qualifications Authority (NZQA) in order to identify how PIHMS can incorporate the necessary skill training in the diploma syllabus. Recommendations are made with the knowledge that PIHMS can enhance the ICT instruction without too much cost or having to employ new staff.

Further research is required to gain comprehensive knowledge of the hospitality industry and the ICT that is now available exclusively for hospitality use and the skills that the industry requires or demands. This research has been based on questionnaires and a focus group with hospitality managers and interviews with PIHMS lecturers; included are field notes that were compiled when talking with hospitality managers and throughout the process of the focus group and interviews.
Chapter Two  

Research Question and Purpose

2.1 Questions

The main research question is:

What ICT skills do selected Human Resource Managers from the hospitality industry think PIHMS graduates should have to further their career in the hospitality industry and how might PIHMS assist them to acquire and/or enhance these ICT skills?

The data gathering sub questions were:

1. What ICT is the hospitality industry is using?

2. What does the hospitality industry deem as necessary ICT skills for PIHMS graduates?

3. Is PIHMS teaching enough ICT skills?

4. Is it necessary to have an accounting package so the students gain a better understanding of accounting and obtaining financial reports?

5. Do PIHMS graduates need to have basic database knowledge?

6. Will graduates be required to generate reports from a database for the General Manager?

7. Does the hospitality industry have other ICT needs that have not been addressed in the ICT area of the PIHMS Degree and Diploma?

8. How could PIHMS enhance the teaching of the identified skills?
2.2 Purpose

Overall this study aims to:

- identify what the hospitality industry desires from PIHMS graduates to ensure that they are sought-after and competitive in the industry; and
- provide recommendations to PIHMS on whether there is a need to include more ICT in the curriculum at PIHMS.

A focus of this study was also to find out if PIHMS is teaching the ICT skills that are appropriate for the hospitality industry after graduating. Do PIHMS graduates possess the ICT skills needed to progress in the hospitality industry or are the hotels or restaurants having to give the graduates extra ICT training to ensure they have the required skills?

2.3 Significance of the Study

There are obvious benefits of this research for PIHMS. As information is a priority in the hospitality industry, there is ongoing development in applications (Stare, Jaklič, & Kotnik, 2006). To be able to employ people that are able to adapt quickly and efficiently to any type of ICT would be a desirable situation for any employer, but for our graduates it would mean that they will be better equipped to be able to gain recognition and receive promotions.
Chapter Three  Background

3.1 Introduction

The Pacific International Hotel Management School is a privately run education institute that is situated in Bell Block, near New Plymouth. It is unusual in the way that it operates, as it is run by the students as a hotel. PIHMS offers:

- PIHMS Certificate in English – New Zealand Qualification Authority (NZQA) level four – this runs for approximately six months with an emphasis on developing English language skills to gain entry into the Diploma in Hotel Management.

- Diploma in Hotel Management – NZQA level 6. The Diploma is run over two and a half years divided into five semesters. Students spend three semesters on campus studying in areas defined below and two semesters working in industry as interns. Successful completion of this program also gives students the (Swiss) Diploma in Hotel Management (IHTTI) and the (Australian) Advanced Diploma in Hotel Management (AQF).

  o Semester one (NZQA level four) is half academic and half operational classes (Food and Beverage – learning how to be a waiter and wine steward at silver service standard and also learning how to be a kitchen hand).

  o Semester three (NZQA level five) is the same format as semester one but the operational areas are in Housekeeping and Front Office.

  o Semester five (NZQA level six) is all academic classes except for Applied Hotel III which requires the students to have a week of rotating 12 hour shifts of Duty Management, in which time they take on all responsibility of the running of the “hotel”. This simulates the real world as it is common for Duty Managers to have
12 hour shifts and also have shifts that are either “split” shifts or back to back – that is working a night shift then working the following day (Johnson, 2005a). Semester five is the extra six months required for PIHMS diploma graduates to be accredited with the Advanced Diploma in Hotel Management. This is an Australian qualification and is audited by the Australian Hotel Review Panel (AHRP) and recognised by the Australian Qualifications Framework (AQF).

- In semesters two and four arrangements are made by PIHMS for students to work in four or five star hotels both in New Zealand and overseas. This is closely monitored by our Industry Placement (IP) department. Whilst out in industry, the students are required to write a journal (logbook) describing all of their experiences and relating the “real world” to concepts and theories learnt at the school.

- Bachelor of Applied Hospitality and Tourism Management – NZQA level seven. This course is an extension of six months after graduating from the diploma and PIHMS also accepts students that have similar qualifications to the diploma. This course has six subjects and is an intense six months for the students. As an applied course, all subjects have both practical and academic requirements.

- Post Graduate Diploma in Hotel Management – NZQA level 8. This is a three semester course and students who graduate with a B grade or higher can apply to Waikato University or to the Australian International Hotel School to complete their Masters in tourism.

Students taking the Diploma in Hotel Management are required to stay onsite where they have their own accommodation that is very much like a hotel. The rooms are rated four and a half star for student accommodation, by Qualmark (2009) who state in their assessment report on PIHMS that “The school offers twin share accommodation with ensuite facilities. The rooms are large and well
equipped, including a mini-fridge, direct dial phone and a computer” (para 1). There are three restaurants and bars in operation on the campus and the students are required to learn all aspects of working in a hotel, including food and beverage services, housekeeping and working the front office reception desk (PIHMS, Pacific International Hotel Management School, 2007a).

The computing system at PIHMS is going through a major overhaul and PIHMS hope to have a new server and all of the campus wireless by the end of 2010. Students who have laptops, at this point in time, can have them modified so they connect to the PIHMS system and depending on where they are on campus they may have wireless connection. The computer suite has 30 computers; these computers are aging and need upgrading. All computers have Microsoft Office Professional 2007 and the operating system is Windows XP. There are 15 computers for student use in the school library and the library does have access to some databases for research such as Ebsco and ProQuest (R. Sarten, personal communication, 2 June 2009). As the school has grown there are not enough computers for all the students. As mentioned earlier all students have one computer between two in their rooms, but they have to “come over” to the campus to print anything – the library, computer suite and administration all have printing facilities.

The size of the computing suite works for the semester one and three students as they are divided into four groups at the start of the semester – two groups undertake operational training for eleven weeks and two groups undertake academic training for eleven weeks, then they swap over. This means that in a class of 60 there are only 30 in academic training at one time. If there are more students than the class capacity, then they are divided into the two academic groups, as previously indicated, and the classes are taught twice. This does not work for semester five as all classes are academic and the class size varies from semester to semester, some semester five classes have up to one hundred students and PIHMS does not have the capacity to be able to teach semester five classes in the computer suite (D. Turner, personal communication, 2 June 2009). All students are given a USB flash drive in their welcome packs when
they first enrol in PIHMS and also receive fifty dollars worth of internet and printing credit. Beyond that they must pay for this service (Y. Powell, personal communication, 2 June 2009).

The lecturers from PIHMS are passionate about the students and their learning. Most lecturers will ensure that the students are gaining all they can from their qualification, whether diploma, degree or post graduate diploma (B. Aldridge, personal communication, 2 June 2009). Many lecturers are willing to gain extra knowledge to pass this on to students and PIHMS is very willing to support this (Duncan, 2009).

3.2 Alliances

PIHMS has alliances with the Australian Hospitality Review Panel and the International Hotel and Tourism Training Institute (IHTTI) in Neuchatel, Switzerland, and belongs to the Leading Hotel Schools of the World. This [the Leading Hotel Schools of the World] is a global alliance group of hotel management schools that consists “of the world’s top hotel schools and academic institutions with dedicated hotel management programs. The mission is to provide the most advanced and comprehensive educational opportunities available to the hospitality industry” (Leading Hotel Schools of the World, 2009, para 1). Having this alliance means that PIHMS offers an internationally recognised diploma and is popular with overseas students as well as New Zealanders. There are often up to 20 different nationalities on campus (PIHMS, Pacific International Hotel Management School, 2007b).

3.3 ICT at PIHMS

Lecturers at PIHMS have commented on a lack of ICT skills in the students. Some students lack typing skills and this is an area of concern throughout any industry (MS office knowledge and typing skills courses, n.d.). Skills needed in the course include the production of professional documents, reports and PowerPoint presentations. Many students have no idea how to use a database
or what it actually does and this is a disturbing thought when most organisations use software that has a database component (W. Low, personal communication, 2 July 2008). Students struggle in some areas of ICT and many have the belief that Google is the ‘best’ search engine for any research (R. Walker, personal communication, 2 July 2008; L. Bridgeman, personal communication, 2 July 2008).

Student’s previous ICT experience is not really enough when they come into PIHMS and PIHMS provides two hours of computing for ten weeks that is supposed to set the students up for industry and the rest of the Diploma. The computing subject is only taught at semester one level and this is basic PowerPoint, Excel, and Word with an initial Outlook tutorial (PIHMS, Pacific International Hotel Management School, 2007b). With only ten weeks, at two hours per week, this makes it extremely difficult for the lecturer and the students to cover even the basics of these packages (J. Deegan, personal communication, 2 July 2008; M. Manu, personal communication, 2 July 2008). Without competency in at least one or two software packages, the students are not really set up to be able to cope with any new software programmes they may face in industry (Marler, Xiaoya & Dulebohn, 2004).

PIHMS uses the Modular Object Oriented Developmental Learning Environment (Moodle) as course management system (CMS). Cole (2005) says “I’ve become a huge fan of Moodle because it is open source, built on a sound educational philosophy, and has a huge community that supports and develops it” (p.4). Moodle has been introduced over the last two semesters. Previously PIHMS used Blackboard and a lot of students found Blackboard harder to use. Moodle is more instinctive to use but some students still have trouble understanding it and require tutorials to use this tool. Moodle is used on campus for some courses – mainly for the discussion forums which seem to be a “safe” environment for quieter Asian students, who develop their critical thinking and analytical skills in this environment sometimes better than in a class situation (R. Walker, personal communication, 20 July 2007; L. Bridgeman, personal communication, 30 July 2007). In class they feel they may “lose face” if they speak out too much and
are often overshadowed by our New Zealand students who are used to an education system that encourages students to speak out (Lawrence, 2009).

Fidelio – a property management system (PMS) is taught in semester three when the students are taught how to operate a Front Office/reception, again at speed – this is taught for a five week period with 16 hours per week. The Fidelio system at PIHMS is now 10 years old and does not have any plug-ins such as Point of Sale (M. Tudor, personal communication, 2 July 2008). Fidelio is developed and produced by Micros-Fidelio. Originally Micros produced the Opera PMS but in 2000 Micros bought out the Fidelio company – this enabled the company to develop their PMS systems even more (Funding Universe, n.d.). The latest Micros-Fidelio PMS is a system that covers all aspects of hotel operations including integration with Food and Beverage, Housekeeping, Maintenance and other areas of a hotel (Micros for hotels and resorts, 2007). Again, as the PIHMS version of the Fidelio system is now aging and a relatively short time is spent on learning this system, it is extremely difficult for the lecturer and the students to cover even the basics of these topics (A. Buent, personal communication, 2 July 2008).

In semester five, the Integrated Project paper requires the students to use all of their marketing, management, operations understanding and accounting skills to run a simulated hotel for a notional period of five years. This simulation is developed by the Orange Group and it is named HOTS for Hotel Online Training Simulation (The Oxford Trust, n.d.). HOTS allows the students to develop a business plan for a hotel which has been run down and they then actually “play” HOTS and run the hotel that they have developed the business plan for. HOTS is not an intuitive programme and a lot of students do not have the computing skills to actually understand what they are doing (L. Bridgeman, personal communication, 3 July 2008). The lack of understanding comes from the fact that the programme itself does not really have a good help area and the instructions are vague – even to the lecturer and the IT professionals at PIHMS. As the students in semester five have nine papers to complete with two
assignments and an exam in most of them, within twenty weeks, there is not enough time at this level to spend on teaching them HOTS.

The alumni website (PIHMS alumni, 2007) confirms that many of our graduates open or buy their own business in the restaurant and bar area of hospitality – this brings up another concern as accounting is a compulsory part of the diploma at all levels but the students are not taught any accounting packages and only basic Excel skills. Cote (2002) discusses the fact that accounting software is a fundamental part of hospitality businesses - because most software can “process data quickly, accurately, and efficiently” (p.166).
Chapter Four     Literature Review

4.1 Introduction

Today’s students at PIHMS are mainly from the Y generation. Cochran (2007, January) describes the Y generation as “Born between 1978 and 1989, Generation Y is the fastest-growing population in the workforce, representing 22 percent of the current workforce” (para 1). Fragiacomo (2005) says in her article:

“Generation Y is a different breed. Ys think differently, behave differently and their beliefs and value systems are decidedly different to their older counterparts. This is the workforce of the future and the group that is fundamental to long-term sustainability. Failure to understand what drives generation Y will result in failure to attract or retain the very people who hold the key to an organisation's survival” (para 2).

Members of the Y generation are supposedly technologically confident but the reality is that whilst members know how to operate computers, their basic skillset relates, in many cases, to games, email (hotmail.com, MSN or yahoo.com) and chat rooms (Tapscott, 2008, December). Fenech (n.d) has found that “They spend more time on the internet than watching TV and know their way around a gadget better than their parents ever will – meet tech-savvy Generation Y” (para 1). Brown, Murphy and Nanny (2003) have studied the Y generation and information technology and have come to the conclusion that although the Y generation is “techno savvy” they often mistake this for being “information literate” (p.386). Holliday and Qin (2004) in their study of the “Y” generation or “millennials” state that the students “are quite capable of using technology, but they are less skilled at the ‘inputs,’ or the critical thinking and questioning that must happen as part of the process of inquiry” (p.356).
4.2 Hospitality ICT uses

ICT changes rapidly in the hospitality industry and with globalisation becoming commonplace, a lot of hotels especially hotel chains find it is necessary to have a proactive approach to ICT (Gabrielsson & Gabrielsson, 2003; Hsueh Chun, & Louvieris, 2004). One of the major systems that is being adopted by most hotels is a property management system (PMS) and this is:

"The single-site version of the central reservation system used by large hotel chains. In a single-site hotel, it will be used to handle reservations and to monitor the status of rooms. The PMS will often connect to other software applications such as accounting, telephone management or restaurant management” (Caterersearch, 2005, para 72).

As time has progressed such systems have developed the ability to interact and be integrated with other systems within the hotel and have become one system with many different options that can be added (Dehan, 2007). Property management systems are becoming an integral part of most hotels in the world. Many hotels are now using their PMS to manage revenue and cover all aspects of their hotel including integration with Food and Beverage, Housekeeping, Maintenance and other areas of a hotel. Many hotels are also customising their PMS to suit their organisations (Albright, 2008; Ostrowski, 2006; Haley, 2006; Litvin, & Crotts 2003). Small hotels, frequently referred to as boutique hotels, usually have employees that work in more than one area. Some of these hotels also concentrate more on offering the guest the highest possible technology in their rooms and have not got a PMS because they find that an accounting package such as MYOB RetailHospitality is just as suitable since these types of packages can be customised to suit the organisation (Viuker, 2007; Hospitality MYOB, 2005). Some of these boutique hotels can be extremely luxurious and others of budget level (Khemsurov, 2005). Often these hotels concentrate on giving the guest a level of personal service not seen in large hotels (Van Hartesvelt, 2006).
Having a broad understanding of what PMS systems can do and what information can be extracted from them must help any employee who is operating these systems to know why they are using them and what value they are to the organisation (Breukel & Go, 2009). In supervisory or line management positions, staff also have to find and generate varying reports from the PMS that the hotel has (Buhalis & Egger, 2008). A PMS is a relational database that has many areas that may be used to entering data. Front Office, Food and Beverage and Rooms Division should be able to enter data into a PMS and then reports can be generated on inventory, room availability or status and customer information (Bardi, 2006). This information is usually for the General Manager or top management, but they often ask staff to retrieve it. David (2007) recognises the importance of being able to extract reliable information to enable the strategists or General Managers to have an “improved understanding of business functions, improved communications, more informed decision making, a better analysis of problems and improved control” (p.153). The PMS should also be able to generate the customer accounts accurately and in a timely manner.

Tesone (2006) talks about hospitality being a unique business, in the way that the staff interact with the customer and have to have faultless processes in place to ensure customer satisfaction. This should include every area that the customer has used in the hotel including the mini bar in their room. Kumar, Smart, Maddern and Maull (2008) researched the area of customer satisfaction and concluded that it is necessary to ensure that customer satisfaction is the most important factor for any business. Brantas International Technology Ltd (2005) promote their system as doing that – providing instant linkages to the PMS and creating an automatic system for the mini bar usage to go automatically on the customer’s account. They add that "front desk staff do not have to ask guests any more whether they have 'had something from the mini-bar?' which increases guest satisfaction” (para 5). Gale (2005) and Perkins (2006) stress that PMS are not going away – they are here to stay and will have an impact on all hotels as they strive to retain or become competitive. The
integration of PMS with accounting and other areas in a hotel is becoming more common.

4.3 Websites and Communications

Most hotels now have online booking systems within their web sites and it is necessary for staff to be able to access this information (Buick, 2003). Ideally this should be linked to the PMS the hotel has, but McNamara (2008) says training staff to do this can be time consuming. Inkpen (1994) states that unless the staff is trained in a particular technology there is not a lot of point spending money on that technology. The understanding of a relational database would aid the employee working these systems (Desrosiers & Harmon, 1996). It is not an expectation of an employee who is not part of an information technology (IT) team to be able to put together a database however they may be expected to run/generate reports based on the data in the database. Therefore to have a general understanding of how a database works and the areas that a database can and will affect would be of benefit to the industry (Strategy Clinic, 2007). Nyheim, McFadden and Connolly (2005) talk about databases and how “databases are playing an ever increasingly important role in the information age. In the hospitality industry their effective usage can help every department better manage assets, expenses and sales.” (p.189).

Marketing departments have a large amount of information that has to be stored so again an understanding of how a database works would assist the hotel (Dailey, 2005; Finan, 2005). Many hotels run a loyalty service so this information has to be stored somewhere. There also have to be security measures put into place to ensure that the customer information is safe (Kalyanam & McIntyre, 2002). E-marketing has become very popular and staff need to have the skills to understand and develop marketing for their organisation (Collins & Buhalis, 2004).

A website is now a common marketing tool in hotels (Shamdasani, Mukherjee, & Malhotra, 2008). It would be an advantage to have staff that has the ability to update a hotels’ website (Business Link, n.d.) – this does not imply that the staff
must have web site development skills but should be able to keep a site updated
and retrieve information when it is needed, especially if the web site has a
booking system. The ability to update and change information on a company’s
website is a necessity and the design and contents of a website must inspire
trust (Buhalis, 1998). It is also a good idea to have links to other trusted sites
as this creates credibility and trust (Cox & Koelzer, 2004; Johnston & Clark,
2005). Nyheim et al. (2005), Tesone (2006) and Musante, Bojanic, and Jian
(2009) suggest that it is important for hotels to maintain and keep their
websites updated at all times. Weaver and Lawton (2006) see the Internet as a
“mainstream media outlet that will eventually rival or even exceed television or
newspapers or magazines. Its creative use as a promotional tool and
distribution channel is illustrated by the rapid development of webcasting
technologies which deliver interactive multimedia (video and audio) in real time”
(p.226). Internet and wireless technology is now commonplace in hotels and
other hospitality outlets (Anckar & Walden, 2001). This is because more and
more organisations have intranet and extranet facilities as well as web sites
(O’Brien, 2002; Cline, n.d.). It is also because the market demands these and to
be competitive all hotels have to have these as a matter of course (Lovelock,
Patterson, & Walker, 2001). Teo (2002) states that the internet is now
commonplace for many people to shop with – this includes booking hotels. All
communication channels are an important aspect for any organisation, whether
e-mail, marketing, or selling on the Internet (Buchanan, 2008; Egger, 2004).

Being able to use Outlook or similar software is now necessary for managers and
employees alike (Chase, O’Rourke, Smith, Sutton, Timperley, & Wallace, 2003).
The use of this type of software is not just for emails but for tasks, booking of
appointments and organising the daily routine for all employees (Racherla & Hu,
2008). Time management skills are demanded of today’s managers and “the
tough, mobile, fragmented, people centred job of the manager can be very
stressful. Every manager faces pressures of work demands, time management
and communications. Every manager handles this in their own way” (Inkson &
4.4 Other ICT

Knowing how to use and set up a presentation for a hotel or to market a product or organisation has become a fundamental part of the hospitality industry. Fox (1995) discusses the importance of employees understanding and being able to set up a positive environment for a speaker to deliver at a conference. Hill and Juneau (2005) discuss the positive aspects of presenting both virtually and in person a marketing campaign. This is reinforced by Rosen (2006) who provides information about a good presentation and how to sell a product.

Another system becoming popular in hotels is supplying customers’ smart cards to use while they are guests at the hotel (Fowler, n.d.) – these cards have an embedded microchip base or magnetic strip system to store data. This system enables the customer to charge any authorised service to this card and pay for it at the end of their stay (Gilligan, 2006). These cards can be used in selected areas either within the hotel or with other organisations such as restaurants and shops allied with the hotel. When accounts are queried and the employee shows some knowledge about what and how things are charged to the customers accounts, the customer is often more satisfied. In many instances the customer is in a hurry to check out and does not want to wait around while the person dealing with him/her has to find things out from someone else in the organisation (Gilbert & Veloutsou, 2006).

In most hotel restaurants there are ordering systems such as Point of Sale (POS) (Carvell, 1996) - the waiter keys in the customer’s order and this information goes directly to the kitchen and to the receptionist in the restaurant so the customer’s account can be generated promptly and without any mistakes. If the restaurant is part of a hotel, the information can also be put onto the customer’s account if requested (Douglas, 2007). The POS system is often linked to a hotels’ PMS.

Accounting packages are also sometimes linked to the PMS but many hospitality organisations still use stand alone systems (Hsu, & Kang, 2004). Accounting packages are becoming necessary within the hotel and hospitality industry. This
is not only to ensure that the organisation is on track but also the hope is that employees can read and understand an account. Accounting data is a very important part of any organisations (Andersson & Carlback, 2009; Kelley, 1996; Phillips, 2004).

The hospitality industry is developing extremely fast and requires more and more qualified staff (Baum, 2006). The industry has a high turnover rate and this necessitates more time spent on training ‘in house’ to do things the way the organisations require (Vaughn, 2008; O’Connor, 2003). Many hotels belong to a chain and find that whatever chain they belong to requires things to be done the same way in all of their hotels – this is a marketing tool that means that their customers should be able to go to any of their hotels anywhere in the world and find the same customer service. Kotler, Bowens and Makens (2006) refer to companies:

“That focuses their attention on both their employees and customers. They understand the service-profit chain, which links service firm profits with employees and customer satisfaction. This chain consists of five links:

1. Healthy service profits and growth – superior service firm performance
2. Satisfied and loyal customers – satisfied customers who remain loyal, repeat purchase and refer other customers
3. Greater service value – more effective and efficient customer value creation and service delivery
4. Satisfied and productive service employees – more satisfied, loyal, hardworking employees
5. Internal service quality – superior employee selection and training, a high-quality work environment, and strong support for those dealing with customers” (p.46).
Kotler et al. (2006) describe the Marriott hotel as an example of this “service profit chain” (p.47). This means that any ICT that can be found in one hotel of a particular chain will be in all of the hotels in this chain all around the world.

What have been discussed above are just some areas identified in the literature where ICT is used in the hospitality industry. Unlike other organisations, this industry relies heavily on sales before the date. Hua, Denizci, Mattila, and Upneja (2007) note that many of the items sold in this industry are evanescent – this means that the emphasis has to be on customer service and the best form of marketing or advertising is word of mouth or public relations (Kotler et al., 2006).

4.5 Training

Fear is a factor that has to be considered when expecting any employee to use technology (Bennett, 2009). Many employees feel incompetent when being introduced to new technology and are afraid to admit to this (Durocher, 2005). Lam, Cho, and Baum (2008) suggest that employees’ attitudes of fear can be overcome by training.

Training is defined by the HR Toolkit (n.d.) as “Providing an employee with the knowledge and skills necessary to perform her/his current job” (para 51). Princeton University (2009) refer to “undergo[ing] training or instruction in preparation for a particular role, function, or profession” (para 4).

Training within the hospitality industry is usually either hands-on training for a few weeks or online training using web based instruction and/or multimedia. The aim of all training in the hospitality industry is to ensure delivering a consistent service to the customer (Dehan, 2007; Peterson, 2006; Kinney, 2004; Higgins, 2006; Verret, 2005). This is because the hospitality industry is a service industry and it is an industry where the emphasis of the product sold is on the service the customer is given and it is “intangible, inseparable, perishable and heterogeneous” (Gilmore, 2003, p.84). There has been some previous research on the subject of ICT training in the hospitality industry but the emphasis has
been on training employees on the job. Employees are the human resource factor that is often forgotten when implementing new ICT systems (Liao & Landry, 2000; Byrd & Turner, 2001; Venkatesh & Davis, 2000). O’Connora and Murphy (2004) analysed 12 hospitality journals looking for ICT themes to gain knowledge of what the hospitality industry trends are towards ICT. They found that the hospitality industry is now keeping up with technology and suggested other research questions such as “In our people intensive business, how does the introduction of technology influence staff effectiveness, productivity and moral? What technological skills, if any, do employees need to take advantage of the rapidly changing technological landscape? Should management focus less on basic skills, such as good customer service, in order to bring employees up to speed technologically?” (O’Connora & Murphy, 2004, p.12).

The concept of taking into account what the employee needs and wants when using ICT in any organisation is important. Employees can feel threatened by the introduction of new ICT (Heintze & Bretschneider, 2000). Training is an area where hospitality industries have to spend time, particularly as it is a service-focused industry (Mullins, 2001).

Tang and Louvieris (2004) investigated the impact of ICT in international hotel chains from a manager’s point of view in order to develop a “ICT benefits scorecard to assist manager’s ICT investment decisions and maintenance of benefits” (p.13); for this they used web-based surveys and most of their research was quantitative. They identified training as a concern for managers when assessing what ICT needs to be implemented. Roepke, Agarwal and Ferratt (2000) researched what human resources for IT would be needed in a very large manufacturing business and stated that employee skills and factors must not be overlooked. Ross, Beath, and Goodhue (1996) also found in their study of IT assets that employee’s skills were important.

Powner (2004) researched agencies in the United States to find out what practices they were putting into place to provide IT training in the workplace and he found that “The most commonly cited obstacles to effective IT training
were funding and the time training takes away from work” (p.8). This is a very common barrier across many industries especially the hospitality industry (Johnston 2003; Brotherton, & Brotherton, 1999; Ispas, 2008).

4.6 Eliminating Barriers

Piccoli, Spalding, and Ives (2001) have developed a framework to improve customer service through the use of IT. Their paper concludes with the comments “The competitive advantage provided by IT can be valuable, particularly if innovations are based on the firm’s distinctive competencies. But the pace of technical innovation requires that strategies must be frequently reevaluated and improved – given that competitors also use IT and customers are increasingly sophisticated” (Piccoli, Spalding, & Ives, 2001, p.8).

Sigala (2002) discusses the productivity impact of ICT in hotels. The methodology used was questionnaires sent to three star hotels in the United Kingdom. The research showed that email and websites were the most popular ICT, followed by PMS and results showed “...evidence of the ICT productivity impact only when the exploitation of the ICT network/integration, informational and transformational capabilities were considered” (p. 425). The conclusion of this study was “...hotel operational efficiencies revealed that hotels using ICT for informational and transformational activities can achieve greater benefits than those using ICT for automation only” (p. 425).

4.7 Curriculum Changes

Curriculum changes should be an ongoing process and part of the review process should include ICT (Breakey, & Craig-Smith 2007). All hospitality schools should be aware that the changes in hospitality trends and the needs of customers are very important. All hospitality programmes should be updated constantly and the university or school that is offering a qualification in hospitality should be monitoring what industry is undertaking – ideally an industry advisory panel should be set up to ensure that any qualification is current and offering what
industry requires (Williams, 2005; Jameson, 2007; Milman, 2001; O'Halloran & Deale, 2004).

“One important mission of hospitality management programs is to prepare students for careers in the hospitality industry. These programs are inextricably linked to the industry that provides placement for relevant types of work experiences, financial support, and employment opportunities after graduation” (Sneed, 1995, cited in Williams, 2005, p. 72).

Another area that needs consideration when implementing any changes to the curriculum and the learning outcomes is the learning styles of the students (Johanson & Haug, 2008). Swanger and Gursoy (2007) surveyed hospitality professionals, formed a hospitality industry panel, had discussions with lecturers within a faculty of a university and

“... a set of program learning outcomes was developed for the undergraduate hospitality core curriculum along with an assessment tool to measure those learning outcomes. Those program learning outcomes center on ten dimensions - industry knowledge, diversity, global awareness, life-long learning, technology, critical thinking, effective communication, ethical leadership, team building, and world-class service - and align with the university's vision, culture, and educational goals” (p.17).

Lashley and Rowson (2005) researched schools, colleges and universities in the North West of the United States via telephone interviews and found that ICT is now a core requirement in the curriculum especially in hospitality schools or courses. Govers and Bleeker (2003) used focus groups with students and interviews with lecturers and IT specialists to find out how to integrate IT into a hospitality curriculum. They found that “... regardless of the level of innovation and efforts made to completely incorporate IT, it is the USE of the technology that determines its success” (p.9).
The integration of ICT and curricula activities is important and one way of aiding this, as suggested in the literature, is for all students to use a laptop as part of their studies. Laptops are being introduced into schools and universities as an integral part of the students’ studies (Arizona school, 2005; Murphy, King, & Brown, 2007; Minkel, 2003). Warschauer (2005) says that laptops can be an important technological tool to aid learning. Laptops reduce the necessity for dedicated computer facilities and in turn keep the cost down. (As schools open, 2004; Johnson, 2005, June).

Yu and Davis (2007) and Alexander (2007) argue that all areas in the hospitality industry need to be scrutinized and ongoing development is needed of learning outcomes in all hospitality courses so they match what industry is doing. According to Raybould and Wilkins (2005), ICT must be incorporated into all aspects of hospitality training “to ensure that programs meet academic standards as well as industry and student expectations regarding the skill sets needed in the workplace” (p. 1). In a later study Raybould and Wilkins (2008) found that “there is a need to ensure the graduates not only meet educational expectations, but also expectations regarding the skill sets needed in the workplace” (para 2).
Chapter Five  Methodology

5.1 Introduction

The research question is: “What ICT skills do selected Human Resource managers from the hospitality industry think PIHMS graduates should have to further their career in the hospitality industry and how might PIHMS assist them to acquire and/or enhance these ICT skills?”

The information was sought from selected HR managers of hotels who employ PIHMS students when they are on industry placement. This was in the form of:

- Historical data
- Opinions
- Factual data

Information was also sought from lecturers from PIHMS who have been in the hospitality industry and have worked as managers in different areas.

5.2 Research Paradigm

The philosophy of this research is the functionalist paradigm with an interpretive slant – functionalist because the research needs to be “concerned with a rational explanation of why a particular organisational problem is occurring and developing a set of recommendations” (Saunders, Lewis & Thornhill, 2007 p.113). The functionalist paradigm became obvious when the research question was first asked as it addresses an organisational problem. Jennings (2001) defines the interpretive paradigm as follows: “there are multiple explanations or realities to explain a phenomenon rather than one causal relationship or one ‘theory’….data are collected from an insider’s perspective rather than from an outsider’s perspective….data are collected in their real world or natural setting as opposed to being collected under ‘experimental’ conditions” (p.38). As the
problem could be solved with more than one recommendation the interpretive
paradigm also has to be considered. For this research both functionalist and
interpretive paradigms were included in the approach taken.

This research was inductive in approach as the question aimed to come up with
solutions to what could be identified as a problem. Collis and Hussey (2003)
explain that inductive research is "a study in which theory is developed from the
observation of empirical reality" (p.15). This is very much what this research
attempted to do – analyse a situation (what ICT skills can we give PIHMS
students) from the points of view of stakeholders (HR managers from hotels and
also lecturers) and come up with a solution to improve the situation (the
recommendations of this report).

This research involved both a case study and ethnographic research. Tellis
(1997) claims that "Case studies have been increasingly used in education"
(para 15) and this research is based on an educational question. Further Yin
(1994) says that many case studies are based on semi-structured interviews and
focus interviews. Cresswell (2003) states that in a case study "the researcher
explores in depth a program, an event, an activity, a process or one or more
individuals" (p.15). Cohen, Manion, and Morrison (2000) note that "Case
studies can establish cause and effect, indeed one of their strengths is that they
observe effects in real contexts, recognizing that context is a powerful
determinant of both causes and effects" (p.181). According to the State
Educational Technology Directors Association (2008), "An ethnography is a type
of case study that focuses upon the cultural patterns that develop within a
group, e.g. district, school, classroom, etc" (para. 26). The previous statement
ties in well with the case study strategy and as focus groups were used this
supports the choice of the strategy of ethnography for the research. Morgan
(1997) observes that "In multimethod uses, focus groups typically add to the
data that are gathered through other qualitative methods, such as participant
observation and individual interviews. The model here is clearly ethnography,
which has traditionally involved a blend of observation and interviewing" (p.3).
The case study was based around PIHMS and the ICT currently being taught there. The research used a questionnaire that was sent out to all HR managers in hotels that PIHMS place students with, both in New Zealand and Australia. There was a focus group (made up of selected HR managers of hotels) conducted at PIHMS during the career week that PIHMS hosts and also four semi-structured interviews with PIHMS operational staff, who have been managers in the hotel industry. Using these gave an overall perspective of the needs and wants of industry.

The following “research onion” (Saunders et al., 2007) depicts the research that has been undertaken to answer the research question.

![Figure 1: The Research onion for this research. Adapted from Saunders et al. (2007, p. 100)](image)

This research onion has been adapted from a diagram that Saunders et al. (2007) developed to use as a way to “depict the issues underlying the choice of data collection techniques and analysis procedures” (p. 100). Saunders et al. (2007) warn that most researchers like to jump to the middle of the research
process (how to gain the research data) rather than starting at the beginning and seeing “how to gain the research data as the end of the process as there are important layers of the onion that need to be peeled away” (p. 100).

5.3 Research Objectives

The objectives of this research were:

1. To establish what ICT the hospitality industry is using.
2. To ascertain what the hospitality industry deems as necessary ICT skills for PIHMS graduates.
3. To determine whether PIHMS is teaching enough ICT skills
4. To determine whether it is necessary to teach an accounting package so the students gain a better understanding of accounting and obtaining financial reports
5. To verify whether graduates need to have basic database knowledge (this is currently not taught at all by PIHMS) and establish whether graduates may have to generate reports from a database for the General Manager.
6. To discern how PIHMS could enhance the teaching of the identified ICT skills

5.4 Method Selection Rationale

The methodology chosen for this thesis was mixed model research. Saunders et al. (2007, pp. 146 – 147) state that

“Mixed model research combines quantitative and qualitative data collection techniques and analysis procedures as well and combining quantitative and qualitative approaches at other phases of the research ... you may take quantitative data and qualitise it ... Alternatively you may quantitise your qualitative data”.

- 36 -
Interviews, focus groups and questionnaires made up the tools for this research along with a journal that was kept by the researcher to ensure any “happenings” were documented and used later in the analysis stage. Creswell (2003) suggests that researchers can “gather observational notes by conducting an observation as a participant”, “analyse public documents (e.g. official memos, minutes, records, archival material” and also “keep a journal during the research study” (p.189).

5.5 Questionnaire Development

Questionnaires may be described as either closed-ended, open-ended or a combination of both. Closed-ended questionnaires are generally used to generate statistics in quantitative research. A prime example of a statistical survey is the census that is conducted in New Zealand every five years (Statistics New Zealand, n.d.). On the other hand open-ended questionnaires are used in qualitative research, hopefully to extract valuable information by encouraging people to include their thoughts. A combination of both closed-ended questionnaires and open-ended questionnaires is common. In this instance, it was possible to generate statistical data to quantify some of the opinions that were given and to reinforce opinions produced through qualitative open-ended questions (Collis & Hussey, 2003; Dawson, 2007). Questionnaires were designed and sent out to 60 hotels at which PIHMS has students placed. The questionnaires were sent to the HR managers (see Appendix 1 for the Questionnaire). With all questionnaires there was an information sheet and a cover letter that indicated that if the questionnaire was filled out consent would be presumed (see Appendix 2 for the Information Sheet).

Questions were structured to gain as much information as possible. Both open and closed questions were used to gain the maximum amount of knowledge from the hotels.
5.5.1 Questionnaire Testing - Pilot Study

The purpose of the pilot study was to evaluate whether the intended audience would understand the questions, could easily answer these questions and whether the results could be presented accurately to attain the research objectives. If the result had been unsatisfactory, the questions would have needed to be modified and adapted immediately to ensure precise results (Alston & Bowles, 2003). Questions were designed and given to three peers. Their feedback was valuable and the research revised the questions to gain the maximum amount of knowledge from the hotels.

5.6 Focus Groups

The focus groups took place during recruitment week at PIHMS (see Appendix 3 for questions). Recruitment week at PIHMS is when many HR Managers of the hotels that employ PIHMS students are on campus to observe and interview their students and select candidates for placement. Due to time constraints, it was not possible to have individual interviews with these managers. The focus group ran for approximately 45 minutes which gave precious verbal information. All participants were given an Information Sheet (Appendix 2) and also were asked to fill out an Interview Participation Consent Form (Appendix 4). Observational notes were used to gather important non-verbal communication. Powell and Single (1996) observed that:

“The focus group has evolved into a data collection technique that is employed commonly in a range of settings throughout the social sciences. Examples include investigating experiences of childbirth, developing consensus guidelines for general practice in medicine, evaluating a school sexuality education programme and determining the decision-making process behind the search for health care…. A focus group is especially useful when:

- existing knowledge of a subject is inadequate and elaboration of pertinent issues or the generation of new hypotheses is necessary
before a relevant and valid questionnaire can be constructed or an existing one enhanced;
- the subject under investigation is complex and concurrent use of additional data collection methods is required to ensure validity;
- the subject under investigation is complex and comprises a number of variables. A focus group enables the researcher to concentrate time and resources on the study’s most pertinent variables” (p.2).

The focus groups worked extremely well and it was found that this is a very good way to gain a lot of valuable information in a short time. It was also observed that focus groups are a good way to get people to interact with one another and once the trust was created information flowed freely (Dawson, 2007).

5.7 Interviews

Semi-structured interviews were conducted with PIHMS operational lecturers who had been operational managers in the hotel industry previously (see Appendix 5 for Interview Questions). These interviews were a valuable tool for the research as the lecturers have firsthand knowledge of what PIHMS does offer in ICT and what can be offered as the lecturers keep current with what is happening in the industry. According to Zorn (n.d.)

“Semi-structured means the interview is not highly structured, as is the case of an interview that consists of all closed-ended questions, nor is it unstructured, such that the interviewee is simply given a license to talk freely about whatever comes up. Semi-structured interviews offer topics and questions to the interviewee, but are carefully designed to elicit the interviewee’s ideas and opinions on the topic of interest, as opposed to leading the interviewee toward preconceived choices” (p.1).
The interviews followed the focus group and questionnaire questions closely – this was to avoid confusion when analysing and to gain triangulation. ESDS Qualidata (2007) state that:

“The interviewer would usually use a standardised interview schedule with set questions which will be asked of all respondents. The questions tend to be asked in a similar order and format to make a form of comparison between answers possible. However, there is also scope for pursuing and probing for novel, relevant information, through additional questions often noted as prompts on the schedule” (para 1).

5.8 Existing Documentation

Relevant course guidelines from the New Zealand Qualifications Authority (NZQA, 2009a) that offers the same type of diploma (i.e. NZ Diploma in Business level 6) were contrasted and compared with the PIHMS syllabus in order to identify how PIHMS can incorporate the necessary ICT skill training in their diploma. As the NZ Diploma in Business offers only level five computing this was an appropriate guideline to use.

5.9 Personal Journal

The researcher kept a personal journal on the research process. This encompassed the four types of notes explained by Ratcliffe (2002):

- “Field notes, a running account of what happens or transcriptions of video or audio tapes.
- Personal Notes--Personal reactions, how you feel, self-reflection, memories, and impressions
- Methodology Notes--Description of methods used, reasons for using those methods, ideas for possible changes in methodology.
- Theoretical Notes--Emergent trends, hypotheses” (para. 1)

This journal was a valuable tool especially for the focus group meeting.
Chapter Six Analysis

6.1 Questionnaires

Questionnaires were designed and pilot tested by peers, as suggested by Dawson (2007), Creswell (2003) and Jennings (2001). Changes that were suggested by the peers were made to ensure the questions were understandable. Saunders et al. (2007) also say that this can help the researcher to gain some insight into the reliability and validity of the data they are hoping to collect.

The questionnaires were sent out via email to 62 hotels in which PIHMS has students doing their industry placement. The email addresses were obtained from the Industry Placement Team Leader. There was some question as to the reliability of some email addresses as personnel change rapidly in the hotel industry (C. Berridge, personal communication, February 20, 2008). The questionnaires were sent to the Human Resource managers of all hotels as they are the point of contact for PIHMS Industry Placement team (see Appendix 1 for the question list).

The questionnaires were first sent on March 3 2008, again on April 24 2008 and finally on May 12 2008. This is in line with what Saunders et al. (2007) suggests for the follow up procedure for questionnaires if the targets are slow in responding. Saunders et al. (2007) also suggest a follow up designed to thank the “early respondents and to remind rather than persuade non respondents” (p.391.). On April 24 and May 12, emails were sent with the questionnaire embedded into the actual email rather than as an attachment, to try and prevent the recipient’s virus scanner and/or firewall rejecting them. Subsequent emails also thanked those that had responded.
6.1.1 Results

Fifteen emails were returned as undeliverable and the presumption is that these email addresses are either out of date or the hotel virus scanner or firewall would not accept these emails.

Fourteen were automatic “Out of Office” replies and some of these recipients did, at a later date, reply to the questionnaire.

Twenty six questionnaires were received and used for analysis.

The response rate was 42% of the 62 questionnaires that were sent out but with the undeliverable questionnaires taken into account (15 or 24%) this meant the overall response for the questionnaires that were actually received by the hotel managers was 55%

All responses to the questionnaires were entered into an Excel spreadsheet and analysed to ensure that all data was relevant and answered within the boundaries of the research question. This was done to make sure that there would be no irrelevant answers and they all made sense. “Cleaning data is necessary because of the fact that data entry involves humans and humans are prone to make errors despite their best intentions not to do so” (Jennings, 2001, p. 282). Some answers can, at times, be irrelevant to the research and possibly have been answered in a different context to what the researcher was aiming at. Chapman (2005) stresses that it is far easier to detect errors at the beginning of any analysis rather than try and go back and correct these later. Very little data was deemed irrelevant by the researcher so this actually reinforced the advantage of pilot testing before the questionnaires were sent out.

The hotels were coded with letters A to Z to ensure the anonymity of the respondents – this is in line with the ethical procedures that are essential in research (Collis & Hussy, 2003). The responses were put into clusters of themes in Excel to make some of the open ended questions quantifiable (Cresswell
2003; Ryan, & Bernard 1999). The closed ended questions were counted using “frequency count and univariate analysis” techniques (Dawson, 2007, p.127).

As the questionnaires contained a mixture of open and closed questions the following pages will detail the findings question by question.

1) *Do you use the Microsoft Office Suite or similar software?*

All responses were yes (100%).

2) *Do you feel your employees have enough knowledge of this suite – this includes word-processing, spreadsheet, presentation and databases?*

As shown in Figure 2, eleven (44%) of the respondents stated that they felt their employees had enough knowledge of the Microsoft Office Suite or similar software. One (4%) gave the response “yes and no”.

Fourteen (52%) stated that they felt their employees did not have enough knowledge of this software. The following graph depicts the percentage of responses.

![Knowledge of MS Office Suite](image)

*Figure 2: Percentage showing knowledge of MS Office*

The next question offered some explanation of the responses:
3) **If no, please comment on what area needs more training.**

The range of answers varied, with twelve respondents requiring more training in Excel, while nine required more training in Typing or Word skills. PowerPoint and Outlook were each mentioned by four respondents.

Responses and interpretation are shown in Table 1:

<table>
<thead>
<tr>
<th>Response</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>We have diverse roles within our organisation – some require these skills, others do not. Some of the people who require these skills in their positions might not have skills in all areas that your question refers to.</td>
<td>Not all employees have the skills required in all areas but have sufficient skills to carry out their job.</td>
</tr>
<tr>
<td>In hotels HODs and Supervisors are required to use Excel for rostering, tables and incentives in their teams. They look at Excel spreadsheets for wage costs and budget targets so it’s good for them to have an understanding of how to use a simple spreadsheet. Often their understanding of Excel is not extremely competent. They are also required to do simple posters for their staff noticeboards to promote things and give notice to staff so knowledge of PowerPoint and Word is also advantageous.</td>
<td>Using and understanding Excel would help both the organisation and the employees. Word and PowerPoint are of concern.</td>
</tr>
<tr>
<td>Would like to qualify this by saying that tertiary graduates including PIHMS graduates have a far greater level of knowledge than employees who have not completed study. Although PIHMS students have a good understanding it is the practical application of software programs that could be improved on especially in understanding the benefits of specific software eg using Microsoft Office as a time management tool</td>
<td>PIHMS graduates understand the practical side of software but do not have general knowledge of how to use and benefit from specific software.</td>
</tr>
<tr>
<td>I say ‘no’ because there is always room for more knowledge and development. In particular there is scope for more development of Excel knowledge</td>
<td>More advanced knowledge needed especially in Excel needed.</td>
</tr>
<tr>
<td>The staff knows the basic function of the software,</td>
<td>Advanced training is necessary.</td>
</tr>
</tbody>
</table>
further on-going training is required to fully utilize the software, as well as the tech updates.

<table>
<thead>
<tr>
<th>Needed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff do not understand databases. Typing and Excel skills need more training</td>
</tr>
<tr>
<td>Database and Excel training are needed. Typing skills of some employees are not good enough</td>
</tr>
<tr>
<td>Microsoft Excel. Auditing features/formula especially for graduates who seek night audit roles. Better formatting, presentation and layout</td>
</tr>
<tr>
<td>All areas of MS Excel will help graduates to advance – this is important in the process of night auditing. Formatting experience would be desirable</td>
</tr>
</tbody>
</table>

4) **Do you have a website?**

All respondents answered “yes” (100%).

5) **If yes, who updates and retrieves the information from the website and do you think the employees know what they are doing proficiently and accurately?**

Responses were as shown in Table 2. Entries in the table have been coloured to give an indication of who updates the respondents’ websites.

**Table 2: Update and Retrieval of information from website**

<table>
<thead>
<tr>
<th>1. We have a specific person who is employed to manage our websites and they do this very well.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. The IT department loads any company documents and staff can easily print any working documents, directories and forms from the intranet. It is easily used.</td>
</tr>
<tr>
<td>3. The Information Systems department</td>
</tr>
<tr>
<td>4. Our website is looked after by the IT team at * Hotels and Resorts head office in Auckland</td>
</tr>
</tbody>
</table>
5. Information updated by a very small number of individuals – IT Coordinator, Marketing Coordinator, Reservations/Revenue Manager. These employees are able to carry out the required work. NB: Due to our brand standards as a global company access to managing these sites is very limited in the Hotel and would not be something a recent graduate would be responsible for.

6. All website updates occur through our Corporate IT Team, Reservations booked through the website use a third party site and are loaded by our Central Reservations Team

7. IT – there is a lot of different types of information to work with and we feel this area is the best to do this. They do a good job

8. IT and management – yes

9. All done with our IT team but could be in a more timely fashion at times

10. All done via head office IT and Marketing team

11. Reservations and IT – this is the best area to ensure the information is accurate. They do a good job.

12. Our head office, marketing team, reservations, IT. These people, yes they are proficient & accurate. Other staff as they are not using the system regularly, are most likely not as proficient or accurate.

13. Website administration is done by the head office. Company intranet allows users to update their contact details etc, which is straightforward

14. Managed at head office level

15. Department Heads and Division Heads update the information on the website and this information is accurate.

16. Hotel owners based in Singapore

17. Managed externally

18. Our Marketing Executive updates our property based website and yes she is very competent in this regard. We have had specific training for her. We have a dedicated team in our corporate office that look after our global website.

19. Sales and Marketing and yes

20. The sales and marketing people do the website updates. We will receive feedback in terms of the accuracy.

21. Sales & Marketing team. Yes

22. Sales and Marketing and yes

23. Sales and Marketing - yes

24. Marketing Executive, Reservationist, Employees/graduates are aware of basic level but at PIHMS they should be taken to next level
25. The property website is updated by all front office. The major component that is updated by front line staff is the booking engine of our website which updates rates and availability for both our own property website but also for third party websites such as Wotif, Needitnow, GDS etc. I update all the property information and wording etc, and I have 1 receptionist who updates all the events and happenings in and around.

26. My manager maintains our available occupancy and rates on our company website, and yes, I feel he has the proficiency and accurateness to do this.

**Legend: **

<table>
<thead>
<tr>
<th>Department</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>IT Department</td>
<td>46%</td>
</tr>
<tr>
<td>Head Office</td>
<td>27%</td>
</tr>
<tr>
<td>Marketing</td>
<td>31%</td>
</tr>
<tr>
<td>Front Office</td>
<td>8%</td>
</tr>
<tr>
<td>Management</td>
<td>4%</td>
</tr>
</tbody>
</table>

* Some hotels use more than one department or person to update their website. This means that the percentages above add to more than one hundred percent.

The following graph in Figure 3 shows the different people or departments that update the websites for the 26 hotels that were surveyed.

**Figure 3: Responsible for updating of websites in hotels**
6) **Would it be beneficial to your organisation if updating and retrieving information from your website is something your employees could be trained to do?**

This response varied from hotel to hotel -

There were 11 responses that stated “Yes – this is 42% of respondents

12 managers responded with a “No” – this is 46% of respondents

One responded with a “possibly” – “Our company website is controlled from our Head office in Singapore, so they expect that someone senior in each of the hotels is charged with looking after each property’s availability and rates”.

Another responded with “Yes and No” – “Yes for their own benefit, but not essential”.

One manager did not respond to this question at all but did comment on the question – “Not for our websites, but we are looking at this for our intranet”.

Comments were asked for to see if the managers of the hotels that were surveyed felt that there was any benefit by having staff update the hotels website.

For the “No” responses the comments were:

- Only relevant to IS department
- There is not really any need for this. If any alterations need to be made we just flick through an email to the IT team
- As per comments above (Question 5) – (Information updated by a very small number of individuals – IT Coordinator, Marketing Coordinator, Reservations/Revenue Manager. These employees are able to carry out
the required work. NB: Due to our brand standards as a global company access to managing these sites is very limited in the Hotel and would not be something a recent graduate would be responsible for)

- As most of the updating is carried out by our Head Office, there would be little benefit in training staff to update information
- Not at hotel level but it would be at head office
- Too many chances of mistakes
- As the corporate website contains information derived from the Property Management System i.e room count/rates etc. It would not be advisable as the risk involved will be significant. Updates are done by specially trained professionals upon request for marketing related materials and/or changes to hotel features

Many of these responses indicated there was too much of a risk of mistakes if staff could update the websites.

For the “Yes” responses the comments were:

- Sometimes the staff that do this job are unavailable and it is important to have someone be able to do it if no one is around but we would rather have a few people do this as then there is very little errors
- If front office staff could do this it would make the predictions of occupancy easier to find out as sometimes this information takes a long time to actually get.
- Could cause problems with the information not being accurate but need a back up person at times
- This would mean that the front office staff could retrieve information about bookings and make sure all specials are up to date as sometimes this takes some time for us to get that information due to IT being busy in other areas
Sometimes we need information straight away and the IT team is not available to do this.

Would help with front line staff knowing everything that is going on with the hotel and being able to ensure that our website is updated - this sometimes is overlooked.

Yes it would be beneficial, however understanding how websites work, how GDS Systems operate from both the property point of view as well as the guest/client/travel agent point of view.

Will help save time on training. Teaching them the whole concept of what they should be doing will be easy.

These responses were positive but cautious about having staff update the hotels website.

One of the comments mentioned the chances of more mistakes being made but information being more readily available is something that all hotel staff need.

This leads on to the next question which goes some way to explaining why the managers are cautious in their comments above.

7) **Do you feel that your employees have sufficient computing skills?**

There were eight responses of “Yes” – this is 31% of the responses.

Sixteen responses were “No” – this equates to 62% of responses.

One responded “reasonable but could be better”.

Another responded with “Yes and No” this response was elaborated on in question 8 (see below) with the statement – “We will always train people with Fidelio skills – often employees do not have sufficient skills in this area. Other computing skills are basic but OK.”
The following graph in Figure 4 shows the responses of whether the respondents think their employees have sufficient computing skills of the 26 hotels that were surveyed.

![Sufficient computing skills among employees](image)

**Figure 4 Sufficient computing skills among employees**

8) **If No, what skills would you like your employees to be trained in?**

The responses varied as follows:

- Typing skills (speed and accuracy) could always be improved
- As mentioned above in question 3, Basic Excel, Word and PowerPoint
- Cannot say, each department will have different requirements, improvement in the control and use of the email system in operation (Lotus Notes software)
- Need further competency in Microsoft Outlook, Word and Excel – focus on efficiency e.g. shortcuts within these software programs
- Graduates arrive with sufficient skills however staff who come directly from school or other employment do not
• As with question 2, I have said ‘no’ because there is always room for more development of such skills to make our employees even more efficient and knowledgeable.

• As mentioned in Question 3, typing skills and Excel for rostering and PowerPoint for data shows. Using Outlook to book appointments.

• Getting reports and operational details from our PMS.

• To a more advanced level with everything [this was the response from the manager who answered “reasonable but could be better”].

The responses to this question indicated it was similar to the question asked in question 3 - “If no, please comment on what area needs more training”.

The next question was designed to see whether all hotels had a Property Management System and whether training in this type of software was seen as important (PIHMS students have five weeks training in Fidelio).

9) **Do you have a Property Management System?**

Only two (8%) out of the 26 responses were “No”. Ninety two percent of all hotels have a Property Management System. The two that responded with “No” were both boutique hotels and as stated earlier often find that an accounting application is sufficient for their needs. (Viuker, 2007; Hospitality MYOB, 2005).

The next question was in regards to the hotels’ PMS to expand on question 9.

10) **Do you think your Property Management System is being used to the maximum that it can be. Example: Is management able to receive reports about all that is going on in your organisation? Please comment:**

There were 22 responses to this question and they have been arranged below to show how the respondents felt about the PMS in their hotels.
Eight (31%) commented positively about their PMS and were happy with the performance of it.

1. It is the GM’s responsibility to communicate what is happening in the property/hotel and what budget/ targets they are to meet / have met.
2. Yes. All facets of the program are used by our management team.
3. Definitely – all done via head office
4. Yes but this is done mainly by senior staff – frontline staff just input information
5. Yes, always
6. We make very good use of our PMS
7. We are happy with the system and it does what is required
8. Yes we are quite satisfied with it

Five (19%) either have new systems and training is ongoing or are part of a chain where support is very good.

1. As part of a larger organisation we have training and support to ensure staff have excellent knowledge of the system
2. The ***** Group has been fortunate to work with a PMS company that develops and initiates ideas and programs that best suits the operation of our businesses as well as being able to draw on the correct and accurate information we need from it. Because of this it does come down to the user utilising the PMS System to its best ability. The tools and actions are there to gain solid information.
3. As we now have our own PMS that is built by the company, it now has features specifically catered for our needs rather than customised PMS from external providers. As mentioned, the PMS is interfaced with a variety of web-based reporting function. It is literally one click away from obtaining relevant information
4. Yes – we use Opera and find this to be a comprehensive tool. NB: We have only changed systems from Maxial within the past 18 months and so
have recently had a high volume of training support from the PMS distributor. This has resulted in a good level of knowledge however with this training only part of the initial purchase package it will be a challenge moving forward to internally maintain this level of knowledge

5. We have just changed into the new PMS, Opera. It is still pretty new to staff. We have finished training and installation; however, it will take a while for everyone to get use to it.

Nine (35%) stated that their PMS could be used better

1. Yes but it would be good if staff could get information from this system not having to rely on the experts from marketing
2. Yes, but like any PMS, it isn’t perfect
3. Constantly looking at ways to improve this.
4. It is a good system which generates a number of reports. Most likely there are others we could make use of
5. Yes but we could learn more, mainly due to time constraints getting basics done.
6. No but this is because the staff do not have an understanding of what areas of information can be used with this.
7. Management retrieve all the reports they need themselves or by the IT people. Could be a good idea for staff to be able to understand how to get this information
8. No there are areas that could be improved on but the staff do not have the understanding of how to do this – training sessions would help with this
9. Not used to its maximum potential but efforts are being made to make sure that all team members make most use of it and giving good output for the system being used

The following graph in Figure 5 shows the responses to Question 10 shows the responses and the percentages
Figure 5: How the hotels PMS is used

The next question moved onto accounting packages as this is an area that had been identified by PIHMS lecturers as “needing attention”

11) **Do you feel there is a necessity for your employees to have knowledge of an accounting package?**

Two (8%) did not give any answer to this question – this means that 92% responded.

There were 13 (50%) that stated “No” with one response being justified with the statement, “No – but would be benefit to staff wanting to progress in their careers”.

Ten (38%) responded with a “Yes” with one response being justified with the statement, “Yes at least basic - they want to be managers. Some business numbers / figures knowledge is essential”

One (4%) gave an answer “Yes and No”

Figure 6 depicts the responses.
The next question keeps on the subject of accounting packages.

12 **Have you any comments to add about an accounting package?**

There was a 69% response to this question (18 out of 26) with the following comments. These comments have been colour coded in the Table 3 according to the content of the comments.

Table 3: Accounting Package Comments

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Accounting packages are very specific to our Finance department. With only 4/255 of our team members employed in this area I don’t think this should be the priority for Hospitality tertiary training</td>
</tr>
<tr>
<td>2.</td>
<td>Not unless they are intending to pursue a career in the accounting side of the industry.</td>
</tr>
<tr>
<td>3.</td>
<td>All the accounting software we use is part of our PMS</td>
</tr>
<tr>
<td>4.</td>
<td>Such a knowledge wouldn’t really be necessary at hotel level but could be for advancement</td>
</tr>
<tr>
<td>5.</td>
<td>Accounting knowledge is good in our hotel but if staff want to advance in the future it may be something they need to help them</td>
</tr>
<tr>
<td>6.</td>
<td>Basic accounting for costing rosters I think is necessary</td>
</tr>
<tr>
<td>7.</td>
<td>For front office positions it would be beneficial</td>
</tr>
</tbody>
</table>
8. It is a benefit to have accounting knowledge but our system is specific to our company at hotel level the best way to learn is to be employed

9. Basic accounting skills are a necessity

10. All staff should have knowledge of accounting and how to use an accounting package as this is part of being in a hotel that has restaurants and has guests booking things to their room. If there is not an understanding of this sort of thing then the guests can get frustrated

11. When interview accounting staff, we would prefer someone who has the experience on using any of the accounting package

12. Accounting is important – no business, especially a hotel can operate without this knowledge and if more staff have knowledge of an accounting package it could lead to guest satisfaction as the guest would not have to wait for someone who has the knowledge if they are asking for explanations about their account

13. Accounting knowledge is a necessity especially when dealing with guest queries but time and budget do not allow employees to be trained in this area unless they have the skills before they start with us

14. Guests ask questions about their account all the time and an understanding of accounting is good. Our accounting area is the place where they use accounting packages and if any staff want to work in that department then they would need knowledge like this.

15. We always ask staff if they have any accounting software knowledge.

16. I don’t feel it’s necessary for students to have an idea about inputting information into an accounting package, but understanding the fundamental components of a Profit n Loss/Balance Sheet. Knowing how to read this information and analyse it is more relevant.

17. Some degree of understanding will be sufficient, does not have to be detailed

18. It would be good to see graduates using their skill to forecast, keep track of figures, compare and analyse data

**Legend**

<table>
<thead>
<tr>
<th>Opinions</th>
<th>Percentage of Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not think that accounting packages are necessary or accounting software is part of the hotel’s PMS</td>
<td>17%</td>
</tr>
<tr>
<td>Accounting packages not necessary but could help with promotion</td>
<td>11%</td>
</tr>
<tr>
<td>Believe that accounting packages and knowledge are beneficial/necessary</td>
<td>72%</td>
</tr>
</tbody>
</table>

The following graph in Figure 7 gives an overall picture of the responses for question 12.
Figure 7: Accounting Package Comments

The last question was designed to ensure that all areas of concern (if applicable) were covered.

13) **Are there any other areas within your organisation you would like to see training put into place for in the information communications technological area before our students graduate?**

Ten out of 26 (37%) did not respond to this question at all.

A further three (11%) responded with “No Thank you”

Three (11%) referred to either question 3 or 8.

The other ten (41%) answers are as follows:

- Basic Excel, Word and PowerPoint.
- If you trained them on the same PMS that we use that would be fantastic! However, a good understanding of a PMS usually enables people to pick up another one more easily. In addition to this, a good grasp of Microsoft would be useful – in particular Excel, Outlook and Word.
• Maybe databases – I understand that databases are the way that most packages are and this could help both myself and all staff to know the basics of how they operate
• Knowledge of what a database can do and PowerPoint skills. Outlook training would help
• Outlook training and Internet usage
• More idea of how to put together a PowerPoint so that our guests can see what is going on. We have an LCD screen that shows events of the week and if more staff could put PowerPoints together competently this would relieve the burden from the staff that do it now. Excel skills are an area where staff needs more ability as this is used for many tasks especially putting together rosters. Basic Word, putting together posters to hand out to guests advertising an event that is happening in the hotel. Some staff do not know how to use Word properly to just type a letter.
• More advanced computing overall
• The Internet has become a major sales and marketing tool for all areas of business. It is essential to have an understanding about Website Optimization and how some basic ideas can be implemented at a property/hotel level without having to employ or contract an IT Specialist company to do this for you.
• Information system security and awareness of the risk involved. Although the general public is aware of potential security breach and consequences, majority of them do not protect themselves adequately
• Telephone ethics, business photocopiers, fax machines.
  Very important - interface training - how all the machines talk to each other.
• What to do if something goes wrong

A summary of the comments above shows:

• Training in Microsoft Office suite applications such as Excel, Word, Outlook and PowerPoint would be preferable on an advanced level
• Database training is recognised as being important.
- Internet understanding and usage are needed
- Security is being accepted as part of business practices
- Understanding is needed of how machines “talk” to each other (databases)
- Troubleshooting is an important skill to have.
6.2 Focus Groups

The next area of analysis is Focus Groups – these were conducted at PIHMS during career days. This is when many of the Human Resource managers or their assistants, from hotels throughout New Zealand and Australia, come to PIHMS to observe and interview students. These managers have time allocated to speak to any of the semester coordinators about the progress of any student. They also spend time with the operational staff to ensure that PIHMS is teaching students what industry requires. They were asked if they had participated in the questionnaire that had been sent to them and the six focus group participants were chosen because they had not participated for various reasons. This made the data obtained “without bias” as the participants had not participated before and had no reason to know what questions were going to be asked therefore the participants had no preconceived ideas of what was expected of them.

Saunders et al. (2007) state that focus groups are an important tool to use in research but there are concerns by experts that focus groups can be confused with group interviews which, although similar, are different in the way the topic is defined. Saunders et al. (2007) describe focus groups as “non standardised interviews” which is the more loosely termed description for group interviews (p.337) while Loughborough University (2004) state that “Focus groups are frequently used to evaluate a programme or an initiative and they are an increasingly popular way to learn about people’s attitudes and opinions. Focus groups are used to gather data that is typically relatively broad, open ended and qualitative in nature. Non-verbal communications and group interactions can also be observed” (p.2). Jennings (2001) and Loughborough University (2004) emphasise that focus groups are a quick and efficient way of collecting valuable data that is valuable for “identifying the needs of a programme” and “organisational development” (Loughborough University, 2004, p.2).

Questions were developed and peer reviewed (see Appendix 3) – these questions were similar to the questionnaire that was sent out to all HR managers in hotels. Loughborough University (2004) emphasise that one of the main
areas to be aware of with the development of focus group questions is to make sure they will “generate the most amount from the participants” (p.5). All participants were given an information sheet as they entered the room used for the focus group and they signed the consent form (Appendix 4) and were given a photocopy of the consent before the focus group began.

The following are the findings of the focus groups, with comments that have been added from observation notes that have been taken throughout the research. The comments have been organised in groups using Excel and these have been colour coded, when relevant, to show patterns and themes that are similar. As suggested by Jennings (2001) “These data are not abstracted into numerical representation; rather they maintain the congruence with the form in which they were collected – an ideographic form. As a consequence, themes and motifs are generated by comparison between data and inferences are made” (p.194).

Note: All Focus Group questions are in **bold italics**. Comments in *plain italics* are from the facilitator using observational techniques. Also to preserve the identity of the participants they have been numbered from 1 to 6. In some responses there is a number in brackets to identify who said different things and when another participant was referred to.

6.2.1 **Results**

*Focus Group Observation:* After greeting and making everyone comfortable the topic that was up for discussion was introduced – all participants knew what the topic was about and they had to fill in consent form – they were assured that all participants would be kept anonymous. A lot of discussion ensued about the intricacies of ICT as some of them confessed they were not that IT savvy. The participants were comfortable with each other as they had met before at PIHMS during career week. After five minutes all were relaxed and quite willing to participate.
1. **What type of IT systems do you have in your organisation?**

Table 4: ICT Systems in hotels

<table>
<thead>
<tr>
<th>Responses</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit card and eftpos, MS Office and Micros – probably other IT but do not really know any more. Reservation system</td>
<td>All hotels had similar ICT systems</td>
</tr>
<tr>
<td>Credit card and eftpos, wireless for guests, MS Office and a PMS custom built for our chain. A reservation system</td>
<td></td>
</tr>
<tr>
<td>Credit card and eftpos, wireless for guests, MS Office and Micros</td>
<td></td>
</tr>
<tr>
<td>Credit card and eftpos, wireless for guests, MS Office and Fidelio</td>
<td></td>
</tr>
<tr>
<td>Credit card and eftpos, wireless for guests, MS Office and Opera. Reservation system</td>
<td></td>
</tr>
<tr>
<td>Credit card and eftpos, wireless for guests, MS Office and Opera Express</td>
<td>Boutique hotel – smaller PMS</td>
</tr>
</tbody>
</table>

Summary: All hotels have similar ICT systems but this was a general question and some were doubtful that their answers applied to all hotels.

2. **Do you have a specialist IT department?**

Responses are shown in Table 5 and sorted according to themes.

Table 5: Specialist IT Departments in hotels

<table>
<thead>
<tr>
<th>Response</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes – and sometimes they are so busy that it takes a lot of time to get the smallest thing done – we do have a system where we can email the help desk to login a problem but that doesn’t always seem to work. I know they prioritise problems and obviously front office is first on the list. IT department can be a pain as they get all technical on us and we really don’t know what they are talking about.</td>
<td>IT department and is not always helpful</td>
</tr>
<tr>
<td>Yes – not always that helpful though ....... that’s exactly what I mean, they (IT) just get too technical and if you ask them how to use something they explain</td>
<td></td>
</tr>
</tbody>
</table>
but it is really fast and way too technical

| Yes – they are really busy but I think a lot of the time it is because a lot of the staff do not know what they are doing…….Our IT guys are really good and they do understand that we don’t know all there is to know and we do have problems Example: the other day they (IT) had to rush into one of the offices because the person using it couldn’t logon, it turned out that they had somehow knocked out the cable to their computer and I think this should be an area everyone is trained to check before this happens as it takes up valuable time and they do have a lot to do. |
| IT department and happy with the relationship between IT and employees |

| No we have a specialist in Accounts – that means everything is cost based. For example we wanted to have another system put on for the staff so they could have training online for our standards – other hotels do this but the cost was too high so it didn’t happen……..our IT guru is cost driven as I have said so even though they are asked to help they are usually way too technical as accountants often are – the lack of time is also an issue |
| No IT department |

| No - Front office manager and marketing have the IT skills – it seems to work OK……..we must be lucky in our hotel as the FO manager and marketing guys do take time out to explain – when they have the time that is |

| No - it is outsourced – we just email or phone the company and they come in and fix the problems – if it is urgent and they can’t get there they have remote access to our system. When there are updates we have to arrange a time with them so they can either come in or access our system as we cannot use the system when they are fixing the issue….. I agree with you about an IT department – techies go way over my head. This is because we belong to *** chain and IT is directed from there. We try to make sure that all hotels in our chain run the same with the same IT and SOP’s (Standard Operating Procedures) |
| Chain |

**Legend:**

| No colour | Yes |
| Mid Grey | No |
| Dark Grey | Chain hotel therefore at distance |
Focus Group Observation: Troubleshooting is an area that all had issues with, some of the participants admitting they were guilty of this as well as other employees. One gave an example of why and they all agreed to having similar experiences.

Summary: Three hotels do have specialist IT departments and only one of the participants felt that their IT department was approachable (but really busy).

Two hotels have staff (a specialist in Accounts in one case, Front Office manager and marketing in the other) who are responsible for the IT in their hotels.

One hotel belongs to a chain and all standards and systems are as similar as possible.

Focus Group Observation: A lot of discussion ensued regarding IT specialists and the way that they handle “ordinary” people. Perceptions were that IT people were too technical for most other people.

If you have, do they give training to new employees?

Table 6 shows the responses and interpretations.

**Table 6: Training given to new employees**

<table>
<thead>
<tr>
<th>Response</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes – but it takes time and sometimes we are short staffed because of sickness or other issues and that means that new staff have to find out a lot of things about the system by themselves as we need them in the area they have been allocated to work. IT can be a pain as they get all technical on us and we really don’t know what they are talking about.</td>
<td>Time was a problem all identified</td>
</tr>
</tbody>
</table>
Only when the PMS was installed - we access our helpdesk from Head Office – they are the ones that make all the decisions about IT and it means they know at any given time how many rooms we have available, what type and at what rate. Training is something that is a “nice to have” unfortunately it takes time and usually everyone is busy so when a new person starts it is hoped they have the basic knowledge and pick things up as they go. 

We don’t really have the time to give training and it is busy so can’t always to it - sometimes they will but not really. I think a lot of IT people (well ours anyway) do not have the skills or expertise to train people anyway. They get very technical and most of the staff, including me, are lost after the first sentence.

To find the time to train new staff is an issue as the Front office manager and marketing are busy or not there when the new person starts. Sometimes it is another employee who shows them what to do and where to find everything.

Sometimes – depends on how busy the accounts person is and if he is on. Then it is up to other staff to mentor the new person so they can get up to speed quickly. This is why we wanted to have an online training system. 

Time is an issue in a hotel as it is 24/7. It is usually picking things up as they work. 

Focus Group Observation: Discussion ensued on time and training until the facilitator brought the topic back to ICT.

Summary: Training is an area that is of some concern as all agreed that time is one thing that is in short supply in the hotels. Training is something they all want and feel would enhance all employees’ skills especially in the ICT area but the industry is a demanding one and time needs to be put aside for this. One of the participants said they had applied to have an online training system put in place – this is what the Hyatt chains have done (Godberg, 2007). Often other employees are often the ones that have to show the new employee how to operate anything in the ICT area.

- 66 -
3. Do you use the Microsoft Office Suite or similar software?

All participants use MS Office

*Do you feel your employees have enough knowledge of this suite – this includes word-processing, spreadsheet, presentation and databases?*

The responses along with areas of concern are shown in Table 7.

**Table 7: Use of MS Office Comments and Areas of Concern**

<table>
<thead>
<tr>
<th>Response</th>
<th>Areas of Concern</th>
</tr>
</thead>
<tbody>
<tr>
<td>No but then neither do I, especially in the database area. All areas of Office for most employees unless they are secretaries or accountants need training. They only use what they need to get by mentioned earlier troubleshooting is an area that none of our staff have skills in. ..........Excel skills to put together a basic roster would help. Even using Word to produce notices for staff, or special menus for conferences etc would be beneficial.... That’s a good point (name 6) updating websites would be a beneficial skill to have</td>
<td>Database, troubleshooting, Excel, Word, Web updates</td>
</tr>
<tr>
<td>Typing is area as that needs attention for some staff as they are very slow….. I don’t really understand databases either........ I agree with (name 1) Excel for rosters and just working out basic accounting would be great.</td>
<td>Typing, Databases, Excel</td>
</tr>
<tr>
<td>No the rest of MS Office is relatively easy to follow but I would have no idea about Access so can’t expect the employees to have any idea either........ Excel and Outlook are areas that need attention........ Outlook to use a diary – I make appointments with staff via Outlook and they do not accept or decline so I end up having to email them again and ask them if they got the appointment booking and to reply to it so it is confirmed.</td>
<td>Access, Excel, Outlook</td>
</tr>
<tr>
<td>Yes Outlook is an application that could be utilised more. ......Rosters are a pain – I agree with (name 1) it’s actually not that hard to do but unless you have done it you have a lot of problems with doing it as it is</td>
<td>Outlook, Excel, Databases</td>
</tr>
</tbody>
</table>
hard to ensure that everyone has an even amount of work time and down time. When it comes to split shift rostering this is even worse to do. I have an idea that databases are an electronic storage area for information but I really do not know how they work so cannot expect the employees to know

<table>
<thead>
<tr>
<th>I agree with the others: Excel and databases - I have some idea that databases &quot;talk&quot; to other departments if they are set up right but more training is needed for all. PowerPoint is also an area of concern as we do PowerPoints regularly and there are only a couple of employees that really know how to use this effectively and make a good presentation ... You (name 6) have a good point – it is always useful to have an idea how to update websites.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excel, Databases, PowerPoint, web site updates</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Not really as managing and booking appointments within the organisation is a mission at times as (name 3) has already said. All areas of Office could be improved on - including my own skills. ... Databases are an area of concern according to marketing as staff do not really understand them. It would also be good if the employees had some idea how to update our web page as when this needs updating sometimes no one is around to do this.</th>
</tr>
</thead>
<tbody>
<tr>
<td>All areas</td>
</tr>
</tbody>
</table>

**Focus Group Observation:** The comment about PowerPoint (PP) created a lot of discussion. All others commented that this was an area that they had not thought of (PP presentation skills) but acknowledged that their hotels had problems with getting an effective presentation set up – most of the hotels had a flat screen TV that shows new information of the day and some staff avoided doing this as they did not have the skills to put an effective PP together. Another area that is concerned with PP is the staff did not really have the skills to help set up a PP that has already been done, for a conference – usually with a data show. Normal behaviour in this area is if they were asked, they went and got the IT person.

Summary: All agreed that there needed to be training on some areas of MS Office. The following graph depicts the areas of concern for the respondents.
If you don’t feel the employees have enough knowledge, in what areas do you feel we as a training institution could improve the knowledge of our graduates?

Table 8: Training needed for Graduates

<table>
<thead>
<tr>
<th>Response</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excel, Access, Electronic ordering systems – having some understanding of what you put in goes somewhere and there are repercussions if things are ordered wrong. <strong>Oh garbage in garbage out</strong> (facilitator). Exactly – we have had problems with this area and it can cost a lot of money</td>
<td>This created a discussion on Garbage in garbage out</td>
</tr>
<tr>
<td>Basic knowledge and Troubleshooting - sometimes it is the switch that has been pulled out and that causes panic. .... What do ordering systems do</td>
<td>All agreed there were areas of concern</td>
</tr>
<tr>
<td>Some of your students do a hard return at the end of every line in Word. Basic stuff, they should know that. Excel and Outlook are really problem areas too. So is the use of the PMS</td>
<td></td>
</tr>
<tr>
<td>PowerPoint, Excel, Web page extraction or update. More advanced knowledge of general MS Office</td>
<td></td>
</tr>
<tr>
<td>More advanced training in all areas. Learning how to use &quot;Help&quot; in all applications - I know I should and think I will take an advanced computing course myself</td>
<td>Advanced computing and using “Help”</td>
</tr>
<tr>
<td>Excel, Access, more training with web pages</td>
<td></td>
</tr>
</tbody>
</table>
Focus Group Observation: Discussion followed regarding the “garbage in garbage out” concept and what ordering systems do. An interesting discussion that needed to be brought to an end by the facilitator as the focus was on ICT.

Summary: Advanced training in all areas would enhance all employees including PIHMS graduates and those students that are on Industry Placement. Ordering systems is an area of concern but not a lot of the group knew how these operate.

4. **Do you feel that our graduates or your employees are able to cope with any of your IT systems?**

   The responses were as follows:
   1. Some – they know the basics but training is ongoing with us all
   2. All need some more knowledge including me
   3. They can cope but not as well as they could
   4. Some but again they need more work on the basics of all systems
   5. If they had more training in most areas then their time management would be better
   6. Yes but as already stated more advanced computing for all employees would benefit everyone

Focus group Observation – again discussion ensued about what basic computing actually was. The agreement reached by all was the knowledge of “how” to use the fundamental functions on particular software which includes how to open and save work in MS Office applications and a PMS.

Summary: All agreed that employees that had graduated or were working in industry placement from PIHMS did have the basic knowledge of these systems (MS Office and a PMS) but need more advanced training in the areas of troubleshooting, using help and being more confident with any system. Some students and graduates are scared they are going to make a mistake and this affects their productivity for the first couple of weeks on the job. International students are particularly reluctant – one participant stated that it is not part of
their upbringing to question and they feel they are being rude by asking and may look stupid as well and they do not want that to happen

5. **Does your organisation have a website – if so who updates and retrieves information from it?**

The following answers have been put into Table 9 showing the themes.

**Table 9: Hotel website and who updates it**

<table>
<thead>
<tr>
<th>Yes</th>
<th>IT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>IT</td>
</tr>
<tr>
<td>Yes</td>
<td>Sales and marketing</td>
</tr>
<tr>
<td>Yes</td>
<td>Sales and marketing</td>
</tr>
<tr>
<td>Yes</td>
<td>Mainly marketing – sometimes management</td>
</tr>
<tr>
<td>Yes</td>
<td>Management</td>
</tr>
</tbody>
</table>

**Legend:**

<table>
<thead>
<tr>
<th>No colour</th>
<th>IT updates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Light grey</td>
<td>Sales and Marketing updates</td>
</tr>
<tr>
<td>Mid grey</td>
<td>Marketing and sometimes management updates</td>
</tr>
<tr>
<td>Darker grey</td>
<td>Management updates</td>
</tr>
</tbody>
</table>

**Focus Group Observation:** Discussion on why it is important to have trust in who updates the websites especially now most hotels have an alliance with wotif.com or lastminute.com

Summary: The responses from this question signify that websites are now common but the issue now with web sites is the updating of the site correctly and in line with the hotels’ alliances with different intermediaries such as wotif.com and lastminute.com to ensure the credibility of the information and the currency of such information.
6 Do you have a Property Management System?

All responded with a "yes".

Focus Group Observation: Discussion on the merits of PMS – all commented on how PMS differ depending on who supplies the system.

**What type is it?**

- Micros
- Custom built for our chain
- Micros
- Fidelio
- Opera Express the smaller version of Opera
- Opera

Focus Group Observation: PMS differed from hotel to hotel but it is interesting to note that Micros is the new version of Fidelio. Micros also have developed Opera. Therefore most of the PMS systems that have been named are different versions from the same company (Micros Systems Inc, 2009). The only PMS that was presumed to be from a different company was one that was custom built for the chain of hotels that the participant worked for. When asked if they knew who the developer was the answer was "no". As Micros is the world’s largest supplier of PMS it is likely that Micros developed this hotel’s system too (Micros Systems Inc, 2009).

Summary: All hotels have a PMS.
What does it do?

Table 10 shows the responses and interpretation of this question.

Table 10: Identification of what the hotels PMS does

<table>
<thead>
<tr>
<th>Response</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Most front and back office and also is linked to F&amp;B and the kitchen ... Oh and maintenance – that’s important</td>
<td>All participants had some idea about what the PMS did in their hotel but were vague in some areas – when (name 3) brought up the fact that their PMS was linked to maintenance others thought theirs may be too.</td>
</tr>
<tr>
<td>2. Most front and back office, accounts and also is linked to Housekeeping, F&amp;B and the kitchen. Most front and back office and also is linked to F&amp;B and the kitchen</td>
<td>As HR managers they have more knowledge about the hotel as a whole and the jobs that are available.</td>
</tr>
<tr>
<td>3. Most front and back office, accounts and also is linked to F&amp;B and the kitchen – it is also linked to maintenance so that things can be fixed without having to go and speak to them or to put in a request by hand. In a hotel like ours – and like all of the others we need to have everything working well especially in the rooms as the guests are not happy at all when anything is wrong with their room so the maintenance thing is probably the most important of all</td>
<td></td>
</tr>
<tr>
<td>4. Most front and back office, accounts and also is linked to F&amp;B and the kitchen......yes agree about maintenance</td>
<td></td>
</tr>
<tr>
<td>5. All sorts of things and does link to other departments</td>
<td></td>
</tr>
<tr>
<td>6. Everything – just like the others. Ours may be a different system but it still does the same thing</td>
<td></td>
</tr>
</tbody>
</table>

Summary: All knew that a PMS is linked to both front and back office departments and is also linked to the kitchen and Food and Beverage. The link with Maintenance was an area that was acknowledged as important.
Is it used to its full potential?

Table 11 shows responses and interpretation of this question.

**Table 11: PMS used to full potential**

<table>
<thead>
<tr>
<th>Response</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I don’t really know</td>
<td>Most were unsure of this question.</td>
</tr>
<tr>
<td>2. Think so</td>
<td></td>
</tr>
<tr>
<td>3. Not sure but think so</td>
<td></td>
</tr>
<tr>
<td>4. Yes I am sure it is</td>
<td></td>
</tr>
<tr>
<td>5. Really am not sure</td>
<td></td>
</tr>
<tr>
<td>6. Don’t really know</td>
<td></td>
</tr>
</tbody>
</table>

Summary: This was an area that most were unsure about.

*Do your employees have the expertise to understand what it does and how to generate reports for management?*

1. Not really sure as IT is not my thing
2. Some do and they think they know it all - they will not share this information with others because they see them as a "threat"
3. Yes but that is not part of their job description - I think it would be good if they could as with all the talk of the recession looming they could keep their job longer if they could multi task
4. Some of them do as I have seen them do it. I can access an HR report
5. No but then they are not expected to as it is managements’ job
6. Have seen reports that have been generated by our PMS but do not know who or how to do it

*Focus Group Observation: All were uncertain in this area*

Summary: Not the participants’ area of expertise
7  Does your hotel use an accounting package? What type is it and would it be useful for our graduates to have knowledge of how to use an accounting package?

Table 12 shows the responses and interpretation of this question

Table 12: Comments regarding an Accounting Package

<table>
<thead>
<tr>
<th>Response</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes but it is one that comes with Micros I think. It would only be of use if the graduates wanted to go into Accounts</td>
<td>This was an area that most participants had only basic knowledge in but when (name 3) said that this was an area that would be good for employees to have to handle complaints this lead to a discussion about complaint handling and from there all discussed the merits of having knowledge of an accounting package should anyone want to go into business for themselves.</td>
</tr>
<tr>
<td>Comes with our PMS and really would not be of great use unless they wanted to advance</td>
<td></td>
</tr>
<tr>
<td>Micros I think has an accounting component in it. I think it would be a good idea if PIHMS graduates had knowledge of how to use this as they can then handle complaining guests</td>
<td></td>
</tr>
<tr>
<td>I am not sure whether we have the Fidelio Plug in for Accounts - probably but they do require accounting software experience if they want to hire someone</td>
<td></td>
</tr>
<tr>
<td>Our hotel is small so we use MYOB Professional - probably would be of use if your graduates had knowledge of accounting and the packages</td>
<td></td>
</tr>
<tr>
<td>I know our accounting department uses some sort of software but am not sure what it is</td>
<td></td>
</tr>
</tbody>
</table>

Summary: Another area that was not in the participants’ expertise but they felt that if employees want to advance any accounting knowledge would be beneficial for them. Knowledge of accounting would help any person who worked on the reception desk as they often have to deal with account complaints.

8  What suggestions do you have as to how PIHMS can enhance the skills of our graduates?

All mentioned advanced computer skills with two commenting that troubleshooting basic applications and computers would give an advantage when
applying for positions - these could then be utilised for training, cross training and multitasking.

9  **Do you think that extra training in computing would enhance the ability for employees to cope especially under pressure?**

The response and interpretations are shown in Table 13

<table>
<thead>
<tr>
<th>Response</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes definitely some guests can be extremely rude and the &quot;customer is always right&quot;. Some employees get very flustered when they are dealing with rude customers and it is a busy time as well......employees are headhunted when they have these skills so they are a desirable aspect to have</td>
<td>All agreed extra training would enhance the employee’s ability to cope especially under pressure.</td>
</tr>
<tr>
<td>Yes as they would not panic ........ I agree with (name 1) on the headhunting aspect – this is how we have one of our duty managers now, she was headhunted because out GM found out that she was very computer savvy and has the personality and the attributes that we need in our hotel</td>
<td></td>
</tr>
<tr>
<td>Yes they could end up staying in a job when the industry starts laying off staff</td>
<td></td>
</tr>
<tr>
<td>Yes as a lot of our staff have to work under extreme pressure at times</td>
<td></td>
</tr>
<tr>
<td>Yes as being a small hotel it is easier to have staff who can &quot;turn their hand&quot; to most things</td>
<td></td>
</tr>
<tr>
<td>Yes as it would eliminate time and mistakes</td>
<td></td>
</tr>
</tbody>
</table>

**Focus Group Observation:**  This question triggered a very animated discussion – many of the participants felt that pressure was one thing all staff in hotels are put under especially by management to meet the guest expectations with very little support at times.

Summary: All participants agree that extra training would enhance all employees’ ability to cope under pressure.
10 Explain what requirements you feel would enhance our graduates’ ability to have a competitive edge.

The response and interpretations are shown in Table 14

Table 14: ICT training to enhance graduates ICT skills

<table>
<thead>
<tr>
<th>Responses</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PIHMS students have the competitive edge over most of our employees anyway but as we are in the technological age the ability to use any software would be an advantage</td>
<td>All commented on the fact that PIHMS graduates and students are so professional especially in operational areas – to have extra ICT skills would make these people even more desirable to employ. PIHMS students are very approachable and obliging and they would be able to train others in their hotels to do anything</td>
</tr>
<tr>
<td>IT skills are always going to be important - even if the graduates don't stay in the industry these skills will help them in any position they wish to have</td>
<td></td>
</tr>
<tr>
<td>PIHMS students are better than any other hospitality graduates as they have two semesters of practical experience in hotels so they should be able to tell you what IT skills they need better than I can. Any IT skills are better than none</td>
<td></td>
</tr>
<tr>
<td>The ability to be able to suss out any software - this would really help them when a hotel gets new or updated software</td>
<td></td>
</tr>
<tr>
<td>Any advanced IT skill would help them especially in our organisation as it is small</td>
<td></td>
</tr>
<tr>
<td>Hospitality is a dynamic industry and the IT is changing all the time. It would depend on whether the students want to actually advance and if they do then any improvement of IT skills would benefit them</td>
<td></td>
</tr>
</tbody>
</table>

Summary: All felt that PIHMS students had a competitive edge over other graduates because of the applied training they received at PIHMS but any advanced knowledge of ICT would enhance the graduate’s chances of promotion. Discussion with PIHMS students lead to reinforcing this point but did lead to a lot of advice on what PIHMS could do to enhance the students ICT skills’.

Focus Group Observation: An animated discussion ensued on the merits of PIHMS students, the facilitator brought the focus group to a close, thanking all participants for their efforts and inviting them to a drinks and nibbles session.
6.3 Interviews

Interviews were conducted with selected PIHMS staff members who have been in the hospitality industry as managers and now work at PIHMS in operational areas. The reason behind interviewing these lecturers is that they have a working knowledge of industry and keep up to date with what is going on in the hospitality industry and also have an understanding of what is taught at PIHMS. There may be a bias in the interviewees and this is the understanding of, and sometimes frustration with, the PIHMS IT system that they have to use and at times use as a teaching tool.

These interviews were semi-structured in nature. The questions followed the same lines as the questionnaire and the focus group questions (Appendix 5). Jennings (2001) states that “Semi structured interviews remain within the genre of conversation; however, the interviewer has a prompt list of issues that focus the interaction. The list adds some structure to the interview…… semi structured interviews are fluid in nature and follow the thinking process of the interviewee” (p.165). Collis and Hussey (2003) note “...interviewees may have certain expectations about the interview and therefore give what they consider to be a ‘correct’ or ‘acceptable’ response” p169). Ticehurst and Veal (2000) emphasise “an important skill in interviewing is to avoid becoming so taken up in the conversational style of the interview that the interviewee is “led” by the interviewer” (p.98). This advice was heeded and the interviewer was able to keep the participants focused on what the interview was about.

Selected staff were approached and asked if they would participate in an interview that would last approximately 30 minutes. All people who were approached consented readily and were given the information sheet (Appendix 2) about the research and a consent form (see Appendix 4). All signed their consent and were given a photocopy of the consent form. All consented to having the interview taped. Each person was interviewed using the same base set of questions (see Appendix 4).
The following are the results of the interviews; lecturers have been coded as LA, LB, LC, LD to ensure their privacy. All of the answers below come directly from what was taped during the interviews.

Note: The questions asked are in **bold italics**. A summary follows each question in *plain italics*. Areas that were discussed and could identify the interviewee have been removed – this does not detract from the information gathered.

### 6.3.1 Results

**What type of IT systems did you have in your organisation?**

**LA** - We just had our own Local area network and all departments had their own PC’s. In most cases it was well organised as everyone had their own PC.

**LB** - Fidello, Outlook for emailing people and a specialist package which I did not use which was for our payroll

**LC** - All hotels I worked in had PMS which was interfaced through Point of Sales, printing networks and also internet as well. Maxial was in the last hotel I worked in.

**LD** - Total Hospitality Service we called it THS, Jet which is a Windows-based system, Micros and Fidello.

*Summary:* All hotels had the basic IT systems – one respondent went into more detail regarding the systems that were available.

**Did you have a specialist IT department?**

**LA** - Most hotels did, however in the ** they had one person who covered all the ** in the city which caused some headaches at times because the poor man could only be in one spot at a time and that made things very slow when we had issues. At the other hotel **** we had about five or six people working in the IT department.
LB – No – if we had IT problems we would get an IT contractor to come out and see us

LC - The larger hotels I worked in did but the smaller ones are inclined to contract this area out.

LD - No – one of the hotels was supported by their accounting company in town which was an agent for the system and the other one was supported by a computer company – outsourced

Summary: IT support varied according to the capacity and location of the hotel.

Did they provide training to new employees?

LA - Training has always been an issue in terms of IT – they put all these wonderful systems in place but the training side of things seemed to be neglected. I have never been in a hotel where they have actually spent time with you training you in the different programmes apart from Excel of course. The only IT information you got was your login and password.

LB – Sometimes if they (the IT contractors) were about – this is where it is important to be trained in technology that gives students transferable skills. By that I mean that if they are trained properly with more in-depth knowledge on how to use software – any software, they would be more confident in tackling any programmes they come across. I know that a lot of people say that this generation has been brought up with technology – to most of our graduates that means being able to use their cell phone for any communication they want and also being able to use the games on a computer. A lot of them have very basic knowledge of using software that is actually productive.

LC – Often hotels where I worked they gave out limited information to some specific employees for example if you were a night manager you were given training on how to fix certain things so the IT technician did not have to come out at 2.00 in the morning.
LD - At the outset of a new system we were trained by the companies – they sent someone down to the hotels to do the initial training but ongoing issues were addressed by the local branch of the companies. There was also a helpline that could be accessed by employees. So if you purchased a new system or an upgrade they would usually send somebody and both companies also had remote access if there was a problem with the system they could fix it offsite. They would usually ring if they needed to do something with the system and would give a day’s notice and then “kill it” and then work on it as long as it was down and find out what the problem was or add a patch if that was what was required – and that was as far back as 2003 - 04

Summary: When new packages were implemented limited training was given. In one case a “help line” was available but in the other three cases training was an ongoing issue.

**Did you have MS Office suite or similar software?**

LA - Yes – well Office with Word, Excel and the database one? Access. We had some specific programmes like Wincheck and Micros – a sharing system and you just basically had to learn by yourself how that was going to work. **So you really did not get any training?** No

LB – Yes we used MS Office Word and Excel

LC - Yes

LD - Only personally for my own stuff – some staff had to use it and spent 70% of their time in front of the computer. They used Word, Excel, Publisher and Outlook. These were applications that staff chose to use as an application of choice

Summary: All hotels had MS Office
**Did you feel the staff had enough knowledge of this suite?**

**LA** - Well most people when they work on computers they’ll train themselves in what they needed so there was really no issue with Word and Excel but when it came to special programmes they just did not know how to work them.

**LB** – No we had a lot of staff coming through that could use Outlook for email and Word but Excel was something different and the database system was something different again – they did not have a lot of knowledge of it.

**LC** - Not always no, especially if you were front office staff you tended to be trained in the front office system possibly emails but not too much on any of the other applications

**LD** - I thought I was good at it until I saw some of the staff using the applications – I think like all those systems you use it to do a job for you. You only touch between 5 and 10% of what it can do. The chef would use a spreadsheet for ordering and cutting food costs – the basic adding, subtracting, multiplying and dividing, that was all he ever did as he did not really trust the other users

*Summary:* Only the areas that people needed were used – this was really all staff needed. Other areas perhaps needed more knowledge. Excel was an application that was used by many but only to do what was required.

**Do you think that we as a training institution could improve the knowledge of our graduates in ICT?**

**LA** - Yes I think there may very well be a need to have an assessment at the start of the semester to see what they can do, in terms of Word, Excel and Access. If they do not perform to the level expected we may then have to look at what we may do in 20 weeks to bring them up to par.

**LB** - Work on Excel, with working with conferences, part payments coming through or more than one activity that delegates can go through. If we are
collecting registration fees and things like that then they can summarise a spreadsheet into who has paid what, when the deposits have been received. Then the database management, definitely for marketing for mail outs and similar things like that and even mail merge is something PIHMS should look at teaching

**LC** - Firstly I believe we should have a Point of Sales (POS) interface and to parallel with industry that would be an important step. In relation to FO and F&B I believe this is important. In regards to other areas, I believe it is not too bad with the facilities that they have but it is just the major issue of the integrity of the systems – some systems not being available during the weekend – printing and the network going down.

**LD** - I think we could improve but every individual leaving the school will go to a different group so what they will need from those systems is so varied. One of the challenges of the school is that we have some very computer savvy, tech savvy kids but that doesn’t make them good students in that subject – just get the kids to put a presentation together and some of the high achievers in the accounting, business evaluation subject are good and are also good when working on spreadsheets and those types of things but it doesn’t mean that they completely understand what they are doing. I think the school’s balance is good but the knowledge of computing and the way they can use these tools needs addressing to ensure that they can both use the application properly and understand what they are doing. More in-depth training would help in this area.

Communications is an area that our students are weak on – using Outlook to book and accept appointments would help students and if they use it properly their time keeping would be a lot better. Outlook has a lot of capabilities and we all probably only use 5% of what it can do but that goes for all applications as I stated before.

*Summary: Excel was discussed as a tool that could be used more. Examples given were about conferencing and rostering. All other MS Office applications were mentioned and it was suggested that more in-depth training would*
enhance the skills of PIHMS graduates. POS was mentioned as this is not currently used in PIHMS and should "parallel" industry. There was also a concern highlighted about the actual system that is at PIHMS.

**Do you feel that our graduates are able to cope with any of the hotel IT systems, especially the Help area?**

**LA** - Kids nowadays are very savvy in that sort of scenario so they pretty well know how it all works but some are really good at it and some need more guidance to approach these.

**LB** - The PMS they could use which is the check ins and check outs. Our graduates have a good understanding of where to go and look for information. Definitely a PMS they can handle but it is the add ons – the other things that they need to do as well. Some may use Help but more would ask. This can become a lot harder for those in the industry as everyone is busy with their own job and it also is harder to ask for help. **To extend on that question somewhat – do you feel that our students know how to use Help within any software programme that they may come across?** Possibly some would but more would use the option to ask if they really have to, rather than use the option of help in the software package. This can become a lot harder for those in the industry as everyone is busy with their own job and it also is harder to ask for help. Adding on to what I said before, the actual being able to tackle any software confidently is important. A lot of our students are of international origin and they do not like to "lose face" by admitting that they do not know things. Our domestic students are like that as well but perhaps more forthcoming; if they do not know anything they are more likely to ask.

**LC** - No I don’t think we have too many resources on the IT side to be able to teach this – especially training

**LD** - I think our students have enough grounding at graduate level to understand how and why the system should work for them. They may not be up to speed with the immediate applications of it but they do know what the system
will do for them but the how is sometimes missing. This goes back to what I said before about more in-depth training in some areas of IT.

Summary: Doubt is expressed about enough grounding in ICT – the use of Help in any package is uncertain; some students will ask but others will not. The comment “They may not be up to speed with the immediate applications of it but they do know what the system will do for them but the how is sometimes missing” is very important.

**Did your organisation have a website – if so who updates and retrieves information from it?**

**LA** - The last hotel I worked in, the Food and Beverage manager had to look after the F&B side of things so had to change menus and stuff like that and that was pretty easy. Normally the sales department looked after the updating of the website but normally we had to press them a few times before they got around to it.

**LB** - Yes. Front office manager was the one that did all updates and retrieval of information.

**LC** - Yes all hotels I worked in had a web site and it got delegated to different personnel - if we had an IT department they usually did it, in conjunction with the financial controller. Sometimes it was done by head office. The last hotel I worked in was managed by head office however I could retrieve data being the Rooms Division manager and so could the General Manager but to ensure the integrity of the data retrieved this was only done by line managers up.

**LD** – Yes. In both hotels the websites were updated by individual companies – outsourced – the hotels did not have IT savvy people to do that and to get the quality that you are looking for in a website to begin with it needed an expert to do this and they carried on doing it – the website especially in hospitality has to have a professional look about it.
Summary: All hotels that the respondents worked in had websites. Various people updated these sites.

**Did the website have a reservation system on it?**

LA – No but was being talked about as I left

LB – No but have now

LC – Yes but run by head office

LD - Yes in the ** we did and when they became a ** (chain hotel) all the housekeeping was run through it and it was accessed through a central reservation system in Auckland so they could check the availability and room categories at any given time. Not seen it used for F&B reservations which it could be. But definitely for rooms and room rates. That has changed hugely because of the quick sales sites like whatif as you have got to have your total hospitality services bang on up to date because you can’t change the rates after the guest has booked and that meant changing more than one system on a daily basis to ensure that you are precise as there is a short lead in to these offers.

Summary: Initially two of the four hotel websites had reservation systems; at least one of the others has one now.

**Did you have a Property Management System?**

LA - Yes most hotels I worked in had Fidelio and most hotels I worked in had Fidelio integrated with maintenance as well and also with reservations and front office so we never had to write out maintenance request forms, it was just put straight into the computer and it was all done for you.

LB – Yes Fidelio

LC - Fidelio, Landmark, Maxial

LD - Total Hotel Systems and Jet
Summary: All hotels had a PMS

Did your employees have the expertise to understand what it does and how to generate reports for management and understand these reports?

LA - The front office people for sure because they got exposure to Fidelio on a daily basis. The other departments like Kitchen, Bar and F&B they just worked with one element - Micros which is just linked to Fidelio so they don’t get to work with that side of things just front office and Night Audit.

LB – Yes to generation but NO to understanding

LC - Employees got trained in all hotels that I worked for, as there was a big focus in all hotels to be able to use your property management system productively and efficiently. We do this here at PIHMS in front office and the students enjoy doing this but it is only five weeks of their time at PIHMS that they get this chance.

LD - The users know what they are using them for and the managers generate the reports that they want. The systems could generate thousands of reports and managers only generate reports that they need. THS took a lot more effort and did not give the information that we wanted in a particular format – whether this is wrong or right when you are the GM and you want all reports transposed into an Excel spreadsheet something is wrong – that shouldn’t be necessary, the system should be able to produce exactly what is wanted in the form required. I think it is a lack of understanding of databases that causes this and also we read the information in the format that we like so I if I was given a report in any format I will still read it in the form I like – i.e. that means that I will read the areas that are most important to me and then go back and cover the other areas which are also important. On that side of things one GM that I worked with only used Publisher for everything, as he felt confident with that and of course when he emailed documents to other people who did not have Publisher on their systems they could not open them. He would never use Word which is the universal application for documents.
Summary: A lack of understanding of databases was expressed as a reason for report generation being a problem when trying to produce a report that is required. Others commented on the staff knowing how to generate a report but lacking understanding. Employees that work in Front Office have more of an opportunity to be able to use these applications than those who don’t.

**What suggestions do you have as to how PIHMS can enhance the skills of our graduates?**

**LA** - First of all we need to ensure that those software programs that we work with are up to date, the PMS system and the plugins that they have – they should be the same as they use in industry.

Secondly the F&B should have a modern contemporary system that produces all the orders and the bills like a Micros system because that is the norm in the industry right now and that is not there so the kids do not get any training in that area neither do they learn what reports can be generated etc so it is a very limited exposure to what they have at the moment. Sadly.

**LB** - Analyse and interpret reports. Explain what the reports are actually saying – what is actually happening to cause these facts and figures and what should the organisation be doing to address it in the future. Analysis and interpretation is important

**LC** – It’s practice makes perfect – just having ongoing exposure but currently they have five weeks exposure which is relatively limited but I guess better than nothing and they do go out into industry with a fair knowledge of being able to adapt to any PMS they need to

**LD** - I think what PIHMS does is very good as it does give the understanding of multiple systems and how they can work for you as opposed to operational training where you get the system and you have to learn it. They know the nuts and bolts of the systems so from that point of view the students have a real advantage but going forward they need to know the application of these systems better and they might learn other systems or the skills to learn how to use
another system quickly as they might go to a hospitality provider that uses a system that is different to the one they know. These systems do not do different things but are different to use and nothing inherently wrong with the system but it is difficult for graduates to learn as we have not given them the skills to do this. It can be difficult for graduates going forward as we don’t have a career guidance path for when they leave us – what I mean by that is that some may be going to a marketing type place and they have to use this application or this hotel chain who has a custom built system for their chain.

**Summary:** At this stage PIHMS offers limited exposure to most applications therefore the students need more time and more ICT offered – for example having more up to date software (PMS), ordering and POS systems would benefit the students.

**Do you think that extra training in computing would enhance the ability to cope, especially under pressure?**

**LA -** They know Word and they know Excel but they don’t see the whole package as it is used in hotels, and that’s probably a shortcoming in our education. The training, we tell them that that’s Word and that’s Excel and that is Fidelio which is already ten years old but we don’t put it all together in one package and that is what the kids are going to have to work with in the industry.

**LB -** Yes – in those areas that I have mentioned Excel and data management but when it comes to reading reports and things like that it comes back into the accounting area again and this is really important.

**LC -** No doubt – the more confident you are with any systems or anything you work with is going to give you an added advantage to deal with any pressure

**LD -** Yes definitely – when our students leave here they will be interviewed by an industry panel for whatever job they want to go to and more and more they are becoming account-driven people as they are not going out to be bartenders as that is not what they are being qualified for. They need to speak the speak and they need to be accounting and technologically savvy to get the job and
they will be found out very quickly if they can’t do it. Our students need more advanced understanding of IT to ensure they can walk the talk. The school should “track” our students into industry so they can find out where all the weaknesses lie in IT and other areas as well. **So this relates to what you said before about integration?** Yes.

**Summary:** All areas need attention – especially PMS, Excel, and data management. A more comprehensive approach is needed to accounting, reading and generating reports, and database understanding.

**Explain what requirements you feel would enhance our graduates’ ability to have a competitive edge especially in the looming economic environment.**

**LA** - Up to date software and up to date IT to make things happen. In the current system I don’t think spending any more time on IT is going to benefit anybody because the quality is not there. We work with old equipment and old software. You can’t make a Volkswagen Beetle go 200 MPH because the car is not built for it and this is the problem with our IT. POS and other extensions so all areas can use the PMS. This is absolutely necessary as that is the way that industry works

**LB** - Not being scared of using new packages and I think a lot of young people are not scared to try new things but do not like to be shown up. Keeping up with the whatif sites and how they work. Not actually the software but knowing and understanding how to configure and set things up – how to do the close out dates and how to manage a reservation website and how to set it up so that the business gets maximum benefit out of having a website – lots of websites are visited but don’t generate business, sometimes because they are not attractive enough to people – it’s understanding what people want.

**LC** - Big question – a competitive edge in industry is what I feel they have now but to extend that greater exposure, currently the programmes are quite compact but I think if we can give more resources into our teaching and integrate the facilities that we have e.g. the interfacing, the operations side of
things. A little bit more time for the students to be able to understand and use these systems to the full capabilities, this would enhance their learning and their ability to be able to interact when they go out into industry. We pack a lot in a short time and some need more time to build on their confidence in these areas. They need to have confidence in knowledge of how the systems are put together and how they work i.e. data input and readable information out. They should also be encouraged and trained to make informed decisions about technology as opposed to being talked down to by ”so called experts”. Knowledge of databases would help our graduates as they may work in the concierge department of a hotel and have to use a concierge reservation system to book customers in to tourist destinations or shows or whatever. These are used more by the large hotels overseas but are becoming popular because when a customer requests a booking with a tour or a show, this system is as fast as the person using it as the result is instant as it is really a database

**LD -** As a school we really need to look at our system here. We sell our product as an integrated management school and we don’t do that here. We don’t integrate our front office and our F&B departments. We should – we are an operational school and then the students will be able to pull off reports constantly in their management shift and duty managers would be speaking about occupancy rates and yields. We don’t speak that language here – we tend to put it in the too hard basket for operations and also academic. We need investment around a proper up and running integrated system so we can use POS. An example is that we use a cash system here – who uses cash in industry? We need to have 70 percent of their café payments should be charge or card payments. We need a system that they can use and read and when the reports tells you that you have 125 percent occupancy – they should realise that they can’t have that. I think the school needs to look at the technical development of the operational side of the subject. Law and industry trends can be taught but our mission statement is the integration of these and more of a focus on that would be appropriate.

*Summary:* Up to date software in the PMS area with plug-ins like POS to ensure all areas are covered and the students can use a PMS effectively, generating,
creating and being able to understand reports. Keeping up to date with technology and not being scared to use it. Having more understanding of how all technology is integrated. Being able to troubleshoot. An understanding of yield management, occupancy and close out dates.

**Do you think there is a need for an accounting package like MYOB – alumni feedback shows that a lot of our students go out and open up their own businesses?**

**LA** - Absolutely – that is what is used in the industry. Large international hotels do not use MYOB but they use a more professional version of it. They need to be introduced to it and have a working knowledge of what it can do. They don’t necessarily have to operate it but need to see what the system can do, what reports can come out of it and how it is going to help them in operating a business.

**LB** – I think so, yes, as they can then see the whole process going through and manipulate the process and see the results. Yes absolutely.

**LC** - Yes definitely this comes back to reading and understanding the reports that PMS generate as many of the reports are about occupancy and expected arrivals – as well as being able to cope with questions from guests who are inquiring about their account. Being able to have an accounting package would allow our students to manipulate and understand the basics.

**LD** - There is a required knowledge of accounting principles and there is a required knowledge of the application of that – this is, looking forward, an important area that needs addressing and an accounting package would help students to gain knowledge in both these areas as they can manipulate data to understand both principles and application. Accounting programs make people’s skills very transparent – you may be able to bluff your way through marketing, management and operations but you either know accounting or you don’t – it’s hard and fast – you either know reports or you don’t and you must be able to read them correctly.
 Alumni shows that a lot of our students leave here and open their own business – bars and restaurants. We have equipped them for that – you don’t open a café because you are “good at making muffins” that would be a recipe for disaster. An accounting package would help them to see the overall picture quickly. Our students have been taught the basics of operating a business and are trained to see key indicators early and react to these, which is what business is all about. Also when doing their tax returns and GST they would not have to pay out large sums of money to their accountant if the package was run to the fullest extent.

Summary: All respondents believe that an accounting package would be beneficial for the PIHMS students as it would give them a working knowledge of the “how” in accounting. Being able to manipulate accounting data and being trained to identify key areas in accounting are important.

This returns to the database question that we were talking about before – do you think our students actually understand databases?

LA - I have my doubts about that as we teach CRM (Customer Relationship management) and it is a software-based system that is basically a database and to try to explain to them what they can do with it is difficult. You can see the questions marks in the air. It is so hard to give them a real life example because there are none and you have to have the software or a working knowledge of what a database is so they can understand what this software can do.

LB - Some do but I think the linkage between operational areas is lost on many of our students and this needs addressing so they can understand the integration between different departments and how entering information in one area can actually impact another. This is where the breakdown of understanding comes in especially with PMS – a lot of students think that what happens in front office is the only area impacted – they do not really understand that there are links to rooms division and also F&B.
LC - No and one area that it is important to have knowledge on is being able to export data to Excel if necessary as many managers do need this information and some systems have to have the ability to export to Excel and then the next person to use this information can then import the data from Excel to the application they use i.e. an accounting package. This happens more in smaller hotels that do not have a complete PMS with POS and the addins like an accounting package.

LD - No – there is a lack of understanding of databases and all that they can do and as I said before, the reports that can be produced from these. I think we need to teach this somewhere in our curriculum – even if it is putting together a basic database and asking questions of it and showing the different areas that can have different access to different information

Summary: All respondents agree that students do not understand databases, and all feel it is necessary for the students to have this understanding as a PMS is a database. Also having knowledge of how to export data into Excel is an area of concern.
6.4 Comparison of NZQA and PIHMS computing papers

The final analysis for this research was a comparison of the PIHMS computing paper with the 550 Business Computing (550 BC) paper from the NZ Diploma of Business. The Learning Outcomes and Performance Criteria of the two computing papers were put into a table and compared to see what the differences and similarities were.

Krippendorff (2004) describes this research as content analysis which "is a research technique for making replicable and valid inferences from texts to the contexts of their use" (p. 18). Content analysis is an important research technique in the social sciences. "Content analysis summarises rather than reports all details concerning a message set". (Neuendorf, 2003, p. 15).

Marsh (2006) states that "content analysis is a flexible research method that can be applied to many problems in information studies, either as a method by itself or in conjunction with other methods" (para 8.).

The following is the analysis of the Learning Outcomes and Performance Criteria of the two computing papers.

Note: The numbers next to the Learning Outcomes are the numbers that appear in the computing papers.
### 6.4.1 Results

Table 15: Comparison of PIHMS Computing and NZQA 550 Business Computing learning outcomes

<table>
<thead>
<tr>
<th>PIHMS Computing</th>
<th>550 Business Computing</th>
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<tbody>
<tr>
<td><strong>Contact hours</strong>: 40 hours</td>
<td>Not explained</td>
</tr>
<tr>
<td><strong>Learning hours</strong>: 100</td>
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<tr>
<td><strong>Aim</strong>: This course is designed to provide a foundation for all the studies and learning within the diploma programme.</td>
<td><strong>Aim</strong>: Students will understand, discuss, evaluate and apply information technology to meet business requirements.</td>
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<tr>
<th>Learning Outcomes</th>
<th>Performance Criteria</th>
<th>Learning Outcomes</th>
<th>Performance Criteria</th>
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</table>
| **1** Be capable of operating the PIHMS computer in a safe manner. | Describe the application and advantages of word processing Be able to make a document look professional Understand the need for document design and be capable of producing it Understand the usefulness and applications of charts for interpreting data. | **3** Students will discuss issues associated with computer use and recommend actions to minimise their impact. | **Key elements**
| | | | a) Ethical and legal compliance requirements. |
| | | | b) Security:
| | | | • risks
| | | | • tools and procedures for prevention. |
| | | | c) Health:
| | | | • occupational health and safety
| **2** Have a basic understanding of Word Processing: | **3** Students will use software functions effectively to produce information to meet business requirements. | **Key elements**
| **3** Understand the usefulness of spreadsheets in the hospitality industry. | | a) Word processing functions:
| | | • mail merge
| | | • styles
| | | • table of contents
| | | • review tools
| | | • tables
| | | • fields
| | | • section breaks. |
| | | b) Spreadsheet functions:
| | | • formulae
| | | • functions, three of the following:
| | | • logical
| | | • lookup
| | | • statistical
| | | • financial
| | | • date. |
- graphs
- cell references, may include:
  - worksheet reference
  - absolute references
  - range names
- data validation tools
- data analysis tools.

c) Database functions:
- field structure
- table relationship
- input forms design
- queries
- reports.

d) Other functions, three of the following:
- email functions
- templates
- object linking and embedding
- collaboration:
  - share file
  - track changes
- file conversions
- macros record and edit
- toolbar modification
- form elements:
  - list boxes
  - text boxes
- modification using multimedia tools
- trouble shoot software problems:
  - help files
  - error messages
  - installation of software
- utilities may include:
  - virus scan
  - firewall software
  - file compression
  - backup
  - system maintenance.

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<tr>
<th></th>
<th>Understand how to search the Internet for Information</th>
<th>Use the e-mail system efficiently and effectively</th>
<th>Students will discuss and evaluate communication</th>
<th>Key elements</th>
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<tbody>
<tr>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>a) Communication channels, may include:</td>
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<tr>
<td>4</td>
<td>Become familiar with an online Learning Environment</td>
<td>Using Moodle</td>
<td>technologies to meet business requirements.</td>
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<td>6</td>
<td>Explain computer fundamentals, terminology and its operations</td>
<td>Understand the importance of a safe workplace</td>
<td>Students will explain and evaluate components of an information system to meet business requirements.</td>
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<tr>
<td>7</td>
<td>Develop a slide presentation using presentation software.</td>
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Comparison of the learning outcomes from the PIHMS Computing paper and the 550 Business Computing paper shows that:

- PIHMS has seven Learning Outcomes whereas 550 BC has only four but they have more comprehensive Performance Criteria.
- 550BC Learning Outcome 4 includes databases, troubleshooting techniques, multimedia, and utilities such as other security procedures such as a firewall and virus scanning whereas PIHMS Learning Outcomes 2 and 5 only highlight word processing and spreadsheets. Databases are an integral part of hospitality ICT Strategy Clinic, 2007; Nyheim, McFadden and Connolly, 2005; Desrosiers & Harmon, 1996)
Learning Outcome 6 for PIHMS is somewhat vague. It could match both Learning Outcomes 1 and 3 from 550 BC but these Learning Outcomes are far more comprehensive. 550 BC Learning Outcome 1 covers all components of computing including storage. 550 BC Learning Outcome 3 covers all the legal and security aspects that are needed in order to have basic knowledge and be able to use information technology effectively and efficiently (Powner, 2004; Ross, Beath, & Goodhue, 1996)

PIHMS Learning Outcome 1 covers some of what is in 550 BC Learning Outcome 3 but 550 BC is more wide-ranging.

PIHMS Learning Outcomes 3 and 4 match with 550 BC Learning Outcomes 2 but there is more emphasis on searching the internet and an online learning platform (MOODLE) in the PIHMS Learning Outcomes. 550 BC Learning Outcome 2 puts more of an emphasis on the communications channels, Internet and networks. Communication channels are extremely important in any organisation especially hospitality Weaver and Lawton 2006; Racherla & Hu 2008)

PIHMS Learning Outcome 7 is unique as it is for presentation purposes and in the hospitality industry this area is important both for front line employees and marketing specialists. (Rosen, 2006; Hill & Juneau, 2005; Fox, 1995).

Overall the 550 BC is a more comprehensive Course Outline which covers all aspects of computing for a student who is entering a business
Chapter Seven  Discussion

7.1 Introduction

The purpose of this thesis was to gain knowledge and understanding of what ICT skills selected managers think are required by the hospitality industry from PIHMS graduates, to ensure that they are sought-after and competitive in the industry. This study has been limited to only PIHMS and the stakeholders that are involved with the organisation. Gabrielsson and Gabrielsson (2003) and Hsueh Chun and Louvieris (2004) have stated that ICT changes rapidly in the hospitality industry, therefore research into this question should be ongoing to ensure PIHMS maintains a competitive edge.

The following sections answer some of the sub-questions asked at the beginning of this research.

7.2 What technology is the hospitality industry is using?

This research has shown that all of the hotels involved in the research have MS Office or similar applications. One area that was discussed a lot is the use of MS Office and the lack of understanding in a lot of areas of the application. Some interviewees admitted that they did not have enough knowledge of MS Office and felt that there was room for improvement for both PIHMS students and their own use. Gabrielsson and Gabrielsson (2003) and Hsueh Chun and Louvieris (2004) state that a proactive approach needs to be taken with ICT. An advanced computing course would help PIHMS overcome this.

There was a PMS in all but two hotels and these hotels were boutique hotels which are usually smaller hotels and have staff that is trained to work in more than one area of the hotel Viuker, 2007; Hospitality MYOB, 2005). A PMS is a large database that is used by many different departments and an ability to use and understand a PMS would enhance the skills of any employee that works in the
hotel industry (Albright, 2008; Ostrowski, 2006; Haley, 2006; Litvin, & Crotts 2003). Gale (2005) and Perkins (2006) are definite in their opinion that PMS’ are not going to go away, they will only improve. PIHMS has a PMS that is ten years old and does need upgrading.

Databases are an area that could be used in every department in the hospitality industry (Dailey, 2005; Finan, 2005). A working knowledge of databases is becoming a necessary part of storage of information especially as a marketing tool (Nyheim, McFadden & Connolly, 2005). PIHMS has no database teaching at all – this is an area that could be improved and PIHMS do have the complete MS Office suite therefore MS Access is available for use.

Websites are now the standard requirement for all hotels; the updating of these sites depends on the hotel as some hotels belong to a chain and in all such instances the website was updated by “head office”. The responses to the question about staff updating the website were divided, with some saying that it would be an advantage and others saying it would not. IT departments and Marketing and Sales were the main people who updated websites. Buhalis (1998) and Musante, Bojanic, and Jian (2009) suggest that it is important for hotels to maintain and keep their websites updated at all times. It is also important to maintain links to other sites (Cox & Koelzer, 2004; Johnston & Clark, 2005; Nyheim et al. 2005; Tesone, 2006). PIHMS students are not given any experience in this area.

Accounting packages varied from hotel to hotel with some respondents not really having a great deal of knowledge about this area. The implications of these findings mean that PIHMS should consider reviewing and implementing more ICT into their curriculum. This would be beneficial to all graduates of PIHMS.
7.3 What do the selected Hospitality industry managers deem as necessary ICT skills for PIHMS graduates?

Industry respondents doubt their own abilities when it comes to ICT especially when they are not talking about an area that they work in. The focus groups and the interviewees were candid about their own abilities with ICT. All respondents had some input into what could be necessary skills for PIHMS. These ranged from advanced computing in all areas of MS Office (or similar) and troubleshooting skills through to typing skills. Excel was an area that dominated a lot of responses and created a lot of discussion in the focus groups and interviews. As all but two hotels researched had a PMS, an updated PMS such as Opera would ensure that PIHMS graduates have a competitive edge. Customising the PMS to include areas such as POS, maintenance, food and beverage and the kitchen would cover all areas of a hotel (Albright, 2008; Ostrowski, 2006; Haley, 2006).

7.4 Is PIHMS teaching enough ICT skills?

Advanced computing in all areas, rostering, typing, communication systems and the ability to use the help feature are all areas that were mentioned during this research. According to the comparison of learning outcomes in Section 6.4, PIHMS is not covering enough ICT and the research reinforces this.

7.5 Is it necessary to have an accounting package so the students gain a better understanding of accounting and obtaining financial reports?

The opinions of the respondents were divided with on this question but PIHMS lecturers who have been in the industry and have a working knowledge of what PIHMS offers all said that an accounting package is a good idea. Comments included “it would help them to see the overall picture quickly” and “Accounting programmes make peoples skills very transparent – you may be able to bluff your way through marketing, management and operations but you either know
accounting or you don’t – it’s hard and fast – you either know reports or you don’t and you must be able to read them correctly”.

Hospitality MYOB (2005) states that many boutique hotels use a programme that is similar to a PMS but is actually an accounting package that has been modified for hospitality. Having the knowledge and ability to be able to understand and use an accounting package is important in many aspects of the hotel industry. (Gilbert & Veloutsou, 2006). PIHMS should introduce an accounting package so that the students do have the ability to read and understand accounts and this would give them a chance to manipulate data and learn.

7.6 Do PIHMS graduates need to have basic database knowledge?

Inkpen (1994), Desrosiers and Harmon (1996), Strategy Clinic (2007), Nyheim, McFadden and Connolly (2005), Dailey (2005) and Finan (2005) all acknowledge that basic database concepts are important. Many of the respondents recognised this and many admitted that they did not really have the knowledge of what a database is.

Through using the Access application of MS Office PIHMS could introduce a basic database to students so they can put together and enter data, learn what a database can do, and how it does it, validate the information entered and use the different access levels. Learning to generate reports from the query tool would also help the level of understanding with databases.

7.7 Will graduates be required to generate reports from a database for the General Manager?

Responses to this question varied. In the focus groups some admitted to not knowing how to do this but knew how to generate a report on the HR systems that they used. PIHMS lecturers who have been in the industry and have a working knowledge of what PIHMS offers all said that the generation of reports
was not really a problem but understanding and being able to read reports is. Being able to understand and manipulate databases and accounting packages would give PIHMS graduates greater understanding of generating reports and being able to export these reports into a different format if necessary. Dailey (2005), Finan (2005), David (2007) and Buhalis and Egger (2008) all state that it is necessary to be able to present and manipulate data and extract useful information from it. The use and understanding of a database would do this and also generate reports. As stated above PIHMS should introduce Access into the curriculum. This will also aid in the understanding of extracting information for reports.

7.8 Does the Hospitality industry have other ICT needs that have not been addressed in the ICT area of the PIHMS Degree and Diploma?

Point of Sale (POS) is one area of concern with many respondents. The latest PMS have plugins to all areas of a hotel including a POS system. Typing skills need addressing as does troubleshooting which is an area that PIHMS does not address. Keeping up to date with new technology whatever it may be would be one way of ensuring that PIHMS does keep up with ICT in industry.

7.9 How could PIHMS enhance the teaching of the identified skills?

Advanced computing and troubleshooting skills were identified by most respondents. Training has been identified as important in the ICT area (Sigala, 2002 Johnston, 2003; Brotherton, & Brotherton, 1999; Ispas, 2008; Powner 2004; Ross, Beath, & Goodhue 1996; Roepke, Agarwal & Ferratt 2000; Tang & Louvieris, 2004; Mullins, 2001; Heintze & Bretschneider, 2000). PIHMS needs to ensure they keep in contact with the hotel industry and listen to the managers of the operational departments as they do keep up to date with what is happening in the industry.
The analysis showed that there are a number of areas that PIHMS could capitalise on to enhance the learning of their students and their graduates. All questions brought up areas of concern and it was interesting to note that this research has shown that all respondents believed that some areas needed attention. These ranged from basic typing skills through to more advanced training. One area that was highlighted was that some of the participants have doubts about their own abilities in some areas. Training on the job is an area that most participants found was necessary but time was always an issue. PIHMS graduates do travel around the world it would be to their advantage to have some extra training in how to get used to using different software and also having a general understanding of relational databases. It is important for the employees of the hospitality industry to have ICT knowledge, as time is important to most customers, especially when they are checking out of a hotel or booking the trip of a lifetime – customers do not want to wait around whilst employees try and check with the information technology department on the whys and wherefores of their accounts.

7.10 Recommendations for PIHMS

There are a number of things that PIHMS could do and because PIHMS are having their system upgraded by the end of 2010 the following recommendations could be taken into consideration doing the system upgrade. Williams (2005), Jameson (2007), Milman (2001) and O’Halloran and Deale (2004) have all emphasised the necessity to accept that the curriculum in hospitality programmes needs to be reviewed on an ongoing basis as the hospitality industry is a dynamic industry and to be competitive curriculum changes are crucial. The following are the recommendations arising from this research.

7.10.1 Property Management Systems

A PMS is one area that PIHMS needs to update. With Micros now having Opera, Micros and Fidelio, the recommendation for PIHMS would be to have an Opera PMS that has the POS and other Food and Beverage necessities, kitchen, maintenance and housekeeping areas all integrated into it. Micros do have the
monopoly on PMS and this is shown by the responses Breukel & Go, 2009; Buhalis & Egger, 2008; Bardi, 2006; Perkins, 2006; Gale, 2005).

7.10.2 PC Drivers Licence

PIHMS could introduce the PC drivers licence from NACCQ into their course. “The Licence identifies that the named individual has achieved a clear level of competence and understanding in the use of Personal Computers for business applications” (NACCQ, 2009, para. 1). To do this they would have to liaise with NACCQ and negotiate how to introduce this. Rather than try and have this as one paper it would be better for the students, as the curriculum is large and time is short, to introduce some elements of the PC drivers licence (PCDL) into different PIHMS papers. Software Applications (SP500), Hardware Fundamentals (HF500), Operating Systems Software (OS500) and LAN Administration (NM500) could be introduced into the semester one computing paper. Internet (IN500) could be introduced into the semester one communications paper and Multimedia Principles (MA500) into the semester one marketing paper. Instead of offering Software Packages (SP510), PIHMS could incorporate Accounting, File Management & Other (SP591) into the semester three accounting paper. This would give all students a good level of understanding of most aspects of ICT (NACCQ, 2009). Gabrielsson and Gabrielsson (2003) and Hsueh Chun and Louvieris (2004) state that ICT changes rapidly in the hospitality industry and the PC drivers licence would give graduates a good quality base on which to build their ICT skills.

7.10.3 Accounting Package

The Managerial Business Evaluation paper that is offered in semester five could include an accounting package such as MYOB and it would give the students the ability to manipulate. It would also give the students a basic understanding of what an accounting package could do (Cote, 2002) if they eventually ended up opening their own business (as PIHMS Alumni (2007) suggests that is happening with some of PIHMS graduates).
7.10.4 **Databases**

A basic relational database could be introduced at Semester Five level in the Managing Hospitality Organisations (HR management) paper in order to design and build a basic relational database in MS Access to track employees. The students could generate reports and manipulate queries to gain an understanding of both a database and the generation of reports; not just how to do it but why it is done and also being able to understand what these reports show.

7.10.5 **Laptops**

PIHMS could enhance their teaching by requiring all students to have a laptop as part of their enrolment package. The cost could be integrated into the fees they charge and as they are updating their server and their wireless capacity this would mean that all papers at PIHMS could, if necessary, be able to cover any area of ICT they wish as all students would be able to logon to the PIHMS network and would be able to work in any classroom. The laptops in schools concept are not new and many recommend this as a way to reduce costs for technology (As schools open; Johnson, 2005; Arizona school, 2005; Murphy, et al. 2007; Minkel, 2003; Warschauer, 2005). As PIHMS has only one computer suite with 30 computers, the laptop concept would enhance the learning of all students greatly.

7.10.6 **Auxiliary Programs**

An auxiliary program such as a typing tutor which can be downloaded at a minimal cost for schools could be available for any students that need to improve their typing skills and it could also be beneficial for any students who have English as a second language (MS office knowledge and typing skills courses, n.d.).
Chapter Eight  Conclusions

8.1 Introduction

This research has found that there are a number of areas that need addressing in ICT. PIHMS is an unusual school as it is run as a hotel with the students being both the guests and the employees. The appeal of the Diploma in Hotel Management is that it is an applied diploma and also the student gains the IHTTI Diploma in Hotel Management and the Advanced Diploma in Hotel Management from Australia. These are key attractions and if PIHMS can enhance the ICT skills of the students they will be more attractive to industry when they are searching for employment. ICT is an ongoing issue as technology changes rapidly and if PIHMS can give a skill set to their students that enable them to adapt to changes quickly and to train others if necessary then they will be very competitive in industry.

8.2 Key Findings

The main needs are:

- More advanced ICT skills to enhance the graduates’ employability.
- A greater understanding of what a PMS can do and does in industry.
- An understanding of databases.
- Troubleshooting skills.
- The ability for employees and graduates to adapt to ICT that they may not have used before.

8.3 Limitations of the study

This research has been limited to one hospitality school (PIHMS), the opinions of selected managers and PIHMS operational lecturers, and a comparison of the
learning outcomes of the computing papers from the NZ Diploma in Business and the PIHMS Diploma. All participants are stakeholders in PIHMS in some way.

8.4 Summary and Research Opportunities

Potential benefits of this research are to PIHMS (both lecturers and students) and also to the hospitality industry.

This research was limited to PIHMS stakeholders – it could be expanded and more research done across other hospitality schools and institutions that offer a Diploma or Degree in hospitality. Ongoing research needs to continue to ensure that the graduates of PIHMS are competitive and are sought after in the field of hospitality.

Hospitality and ICT have a lot in common – they are dynamic and they are relatively new industries that are growing every day (Chapman & Corso, 2005; Boella, 2000; O’Brien, 2002; Jennings, 2001), therefore this research needs to be built on and the environment monitored every year. PIHMS should ask their industry advisory board and make direct contact with hotels and other hospitality organisations to ensure that they are keeping up with industry requirements.

8.5 Conclusion

There are a number of areas that PIHMS could improve in ICT to ensure that their graduates have a competitive advantage when entering industry after graduating. This research report recommends to PIHMS that:

a) The enrolment fee provide for each student to have exclusive use of a laptop.

b) Their PMS be upgraded to Opera and include any plugins that are necessary to ensure that Food and Beverage, kitchen, maintenance and housekeeping areas can be integrated into it.

c) An accounting package such as MYOB be incorporated into the semester five accounting paper
d) Database development be introduced.

e) PC Drivers Licence from NACCQ be incorporated.

f) A typing tutor program be made available for students

PIHMS needs to keep up to date particularly with ICT to ensure that PIHMS graduates do gain a competitive advantage when applying for positions in the hospitality industry. Employees can feel threatened by the introduction of new ICT (Heintze & Bretschneider, 2000) and if PIHMS is able to reduce the threat by implementing better training in ICT then this will ensure that PIHMS graduates are sought after.

The purpose of this thesis was achieved in that it extended the knowledge and understanding of what ICT skills selected managers think are required by the hospitality industry from graduates of the Pacific International Hotel Management School (PIHMS). Recommendations have been made that should ensure PIHMS graduates remain desirable employees in the hospitality industry.
Reference List


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Appendices

Appendix 1 Questionnaire

This questionnaire has been designed to find out whether the Pacific International Hotel Management School can redesign its computer courses to enhance the skills that it gives to its graduates when they enter the hospitality and tourism industry. Completing and returning this questionnaire will indicate your consent to be involved in this research.

1) Do you use the Microsoft Office Suite or similar software?
   a) Yes
   b) No

2) Do you feel your employees have enough knowledge of this suite – this includes word-processing, spreadsheet, presentation and databases?
   a) Yes
   b) No

3) If no, please comment on what area needs more training.

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________

____________________________________________________________________________________
4) Do you have a website
   a) Yes
   b) No

5) If yes, who updates and retrieves the information from the website and do you think the employees know what they are doing proficiently and accurately.

6) Would it be beneficial to your organisation if updating and retrieving information from your website is something your employees could be trained to do?
   a) Yes
   b) No

   Comments: ____________________________________________

7) Do you feel that your employees have sufficient computing skills?
   a) Yes
   b) No
8) If No, what skills would you like your employees to be trained in?
________________________________
________________________________
________________________________
________________________________

9) Do you have a Property Management System?
   a) Yes
   b) No

10) Do you think your Property Management System is being used to the maximum that it can be. Example: Is management able to receive reports about all that is going on in your organisation? Please comment:
________________________________
________________________________
________________________________
________________________________

11) Do you feel there is a necessity for your employees to have knowledge of an accounting package?
   a) Yes
   b) No

12) Have you any comments to add about an accounting package?
________________________________
13) Are there any other areas within your organisation you would like to see training put into place for in the information communications technological area before our students graduate.

Thank you for your participation.

Your responses will be treated in the strictest of confidence.

M van Praagh Lecturer and Year Three Coordinator

Pacific International Hotel Management School
Appendix 2  Information Sheet for Research

Information Sheet

PIHMS Graduate ICT Skills

You are invited to take part in research being undertaken as part of the Master of Computing Programme at Unitec Institute of Technology. The main question being researched is:

What ICT skills do selected Human Resource Managers from the Hospitality industry think a Pacific International Hotel Management School (PIHMS) graduate should have to further their career in the Hospitality industry and how might PIHMS assist them to enhance and/or acquire these ICT skills.

The primary researcher is Maree van Praagh (Lecturer PIHMS). The research will be conducted under supervision from Dr Noel Bridgeman, UNITEC (supervisor) and Ranjana Shukla, UNITEC. The research will take place over an eight month period from November 2007 to June 2008.

Data collection will be through interviews with key personnel of the hospitality and tourism industry (Human Resource Managers, or Hotel Managers) and questionnaires sent to different organisations where the PIHMS students are on
industry placement. There will also be an analysis of documentation (Course Outlines, NZQA papers, policies, and Ministry documents).

Interviews will be conducted at PIHMS at a time suitable to the interviewees. The interviews will be taped to allow transcription. The time needed for each interview should be 30 minutes.

All persons taking place will have access to the completed research. A summary of the research findings will be sent to them.

Confidentiality and your anonymity will be protected in the following ways:

- No reference will be made that identifies the individual (or outside institution) involved
- The primary data (interviews and notes) will be stored securely for at least 5 years.

Please contact the primary researcher (see below) if you have any further questions.

Maree van Praagh
1404A Devon Road
PO Box 21
WAITARA
Phone 06 7547491 (Home) 06 755 0025 (Work)

UREC REGISTRATION NUMBER: (2007.782)

This study has been approved by the UNITEC Research Ethics Committee from (20 November 2007) to (19 November 2008). If you have any complaints or reservations about the ethical conduct of this research, you may contact the Committee through the UREC Secretary (ph: 09 815-4321 ext 7248). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.
Appendix 3 Focus Group

1. What type of IT systems do you have in your organisation?

2. Do you have a specialist IT department?
   
   If you have (a specialist IT person or department), do they give training to new employees?

3. Do you use the Microsoft Office Suite or similar software
   
   - Do you feel your employees have enough knowledge of this suite – this includes word-processing, spreadsheet, presentation and databases?
   - If you don’t, what areas do you feel we as a training institution could improve the knowledge of our graduates?

4. Do you feel that our graduates or your employees are able to cope with any of your IT systems?

5. Does your organisation have a website – if so who updates and retrieves information from it?

6. Do you have a Property Management System?
   
   - What type is it?
   - What does it do?
   - Is it used to its full potential?
   - Do your employees have the expertise to understand what it does and how to generate reports for management?

7. Does your hotel use an accounting package? What type is it and would it be useful for our graduates to have knowledge of how to use an accounting package?

8. What suggestions do you have as to how PIHMS can enhance the skills of our graduates?

9. Do you think that extra training in computing would enhance the ability of your employees to cope especially under pressure?

10. Explain what requirements you feel would enhance our graduates’ ability to have a competitive edge.
Appendix 4 – Interview Participation Consent Form

Interview Participation

Consent Form

PIHMS Graduate ICT Skills

The purpose of this thesis is to gain knowledge of what the hospitality and tourism industry require of their employees so that the Pacific International Hotel Management School (PIHMS) may prepare its graduates better for industry and give them a competitive edge.

The research is being done by Maree van Praagh from UNITEC New Zealand, and will be supervised by Dr Noel Bridgeman UNITEC and Ranjana Shuckla? UNITEC.

Name of Participant: .................................................................

I have read and understand the information sheet given to me. I have had the opportunity to read the contents of the information sheet and to discuss the project with Maree van Praagh. I am satisfied with the explanations I have been
given. I understand that taking part in this project is voluntary (my choice) and that I may withdraw from the project at any time. I agree to have this interview tape recorded (strike out if you do not agree).

I understand that I can withdraw from the interview if, for any reason, I want this.

I understand that my participation in this project is confidential and that no material that could identify me will be used in any reports on this project.

**I have had enough time to consider whether I want to take part.**

I know whom to contact if I have any questions or concerns about the project.

The **principal researcher** for this project is Maree van Praagh - email: mjvp@xtra.co.nz, phone 06 7547491 (home), 06 7550025 (work),

Signature…………………………………….(participant) …………..…….(date)

Project explained by Maree van Praagh

Signature………………………………………………              …………...(date)

The participant should retain a copy of this consent form.

UREC REGISTRATION NUMBER: (2007.782)

This study has been approved by the UNITEC Research Ethics Committee from (20 November 2007) to (19 November 2008). If you have any complaints or reservations about the ethical conduct of this research, you may contact the Committee through the UREC Secretary (ph: 09 815-4321 ext 7248). Any issues you raise will be treated in confidence and investigated fully, and you will be informed of the outcome.
Appendix 5 Interview Questions

Interviews

1. What type of IT systems did you have in your organisation?
2. Did you have a specialist IT department?
3. Did they provide training to new employees?
4. Did you have MS Office suite or similar software?
5. So you really did not get any training?
6. Did you feel the staff had enough knowledge of this suite?
7. Do you think that we as a training institution could improve the knowledge of our graduates in ICT?
8. Do you feel that our graduates are able to cope with any of the hotel IT systems, especially the Help area?
9. Did your organisation have a website – if so who updates and retrieves information from it?
10. Did you have a Property Management System?
11. Did your employees have the expertise to understand what it does and how to generate reports for management and understand these reports?
12. What suggestions do you have as to how PIHMS can enhance the skills of our graduates?
13. Do you think that extra training in computing would enhance the ability to cope, especially under pressure?
14. Explain what requirements you feel would enhance our graduates ability to have a competitive edge especially in looming economic environment.
15. Do you think there is a need for an accounting package like MYOB – the alumni shows that a lot of our students go out and open up their own businesses?
16. This returns to the database question that we were talking about before – do you think our students actually understand databases.