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Effective Use of Simulations in Hospitality Management Education – a Case Study

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Abstract

Simulations are widely used tools today, not only as analytical applications to support decisions but also for instructional applications in management education. This case illustrates how a subject, based on a computer simulation, has evolved from being 'a waste of time' – according to most stakeholders – to becoming a model that other subjects are benchmarked against. The case will outline how a specific simulation is used and also show why a simulation cannot be taken 'straight off the shelf' and become the tool it has the potential to be, but rather how a continuing process of lecturer and student evaluation and enhancements is needed.

Keywords: Simulation, Hospitality, Education, Teaching Methods, Hotel Operation Training System (HOTS)

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Introduction

The Hotel Operation Training System (HOTS) is a computer-based simulation suite developed and marketed by The Total Simulator Company, a British-based company, for the service industry. The version used and referred to mostly in this case study is the HOTS 2001 version, though a newer and enhanced version is being introduced as this case study is written.

Simulations have most commonly been used as tools to analyse what sort of effects may be expected from actions taken in uncertain situations, such as in the launch of a space shuttle. However, it is not only for the analysis of such a complex environment that simulations are used. They are now also widely used for educational purposes. A survey of US business school education reported that some sorts of simulations were used in 97.5 percent of the American Assembly of Collegiate Schools of Business in 1998 (Faria, 1998).

Since the previously mentioned survey, the use of simulations – particularly those which are computer-based – is generally assumed to have increased because of the advances in, and availability of, more sophisticated simulation systems (Feinstein and Parks, 2002a). Simulation-based business education has been studied for more than 40 years. Consequently there are many research projects, reports, and articles written about it (e.g. Wolfe and Crookall, 1998). The purpose of this paper is to explain why simulations can be useful as educational tools and how simulation-based teaching can be delivered most effectively in hospitality management education. This is based on the analysis of a case study, earlier studies, and the learning process that takes place within simulation-based learning.

The first part of this paper reviews past studies in order to give the reader a good understanding of the topic. The definitions of simulations are reviewed then studies on the benefits of simulation-based learning, as well as its constraints, are considered. A case from an institution that uses simulations is subsequently presented. Analysis of the simulation-based learning process is informed by Kolb's (1984) experiential learning model. The last part of the paper suggests the way to structure simulation-based learning courses, and how simulations can be applied in hospitality management education.

Simulation-based learning

SAGSET (Society for Advancement of Games and Simulations in Education and Training) defines a simulation as "a working representation of reality; it may be an abstracted, simplified or accelerated model of a process" (SAGSET, cited in Ruohomaki, 1995: 13). Feinstein and Parks (2002b) categorise simulations into four groups according to the design and applications. In terms of design, there are *iconic* simulations and *symbolic* simulations. Iconic simulations are "visual, auditory or kinaesthetic representations of real systems" (Feinstein and Parks, 2000b: 398), such as flight simulators and even some video games. Symbolic simulations, on the other hand, replicate systems through mathematical process. This type of simulation can be conducted with only numeric variables on a spreadsheet.

Simulations can be further divided into two types according to their application. *Analytical* simulations are used to simulate a certain phenomenon and allow the user to carefully analyse it to support decision-making. An example of this would be one that simulates the flow of hotel guests when they check in and out. This simulation would allow front office managers to analyse the level of business so that they can implement effective staff rostering. In contrast, *instructional* simulations are used for education and training purposes.

The type of simulation this paper mainly discusses is an instructional-symbolic business simulation. This type of simulation often has elements of gaming. SAGSET (cited in Ruohomaki, 1995: 14) further defines simulation games thus:

> "A simulation game combines the features of a game (competition, cooperation, rules, participants and roles) with those of a simulation (incorporation of a critical feature of reality)."

Benefits of Simulation-Based Learning

One of the benefits of using instructional simulation games is the development of decision-making skills (Fawcett, 2002; Fripp, 1993). By its definition, a simulation provides a certain level of reality, but it still remains just a representation of the reality. Thus participants can make difficult decisions and develop decision-making skills without the risk of severe failure that could have damaged the business if practiced in the real world (Ferreira, 1997). To be module specific, Fripp (1993) stated that marketing knowledge and skills can be developed significantly through business simulation games and Toomey *et al.'s* research (1998) supported this idea. They also reported that the participants' applied computing skills, such as use of Microsoft Excel, were dramatically developed through the analysis process of the simulation. Not only spreadsheet skills, but also other skills to deal with quantitative data, can be developed, as they often require the handling of numeric variable inputs and analysis of calculation outputs.

Fawcett (2002) states that simulations can give participants better understanding of financial reports such as profit-and-loss statements and balance sheets, because participants can see the clear relationship between their decisions and the financial results. He also reached a similar conclusion in his previous study with Lockwood (2000) and stated that a business simulation game benefits participants in developing their capability and confidence with practical accounting skills, skills which are difficult to develop through traditional course structures.

Fawcett and Lockwood (2000) also highlighted teamwork as another skill that is difficult to develop in a normal classroom situation. They argue that it is possible for lecturers to teach group work skills in a classroom situation, but to gain a true understanding of group dynamics students must experience a role in a real working group. Simulation games can often provide ideal circumstances for this. Through group work, communication skills in particular can be developed further (Gopinath and Sawyer, 1999), including: conflict-resolution skills (Ruohomaki, 1995); the ability to cope with diverse personalities (Roberts, 1999); and changing own behaviour (Jennings, 2002), because the participants have to work closely together and interact to progress in the simulation.

To create practical group work circumstances, Roberts suggested that participants not be allowed to choose team mates themselves, but should be placed in teams randomly, "just as new employees do not select peers" (1999: 43). However, it is also true that by allowing participants to form a group with somebody whom they feel comfortable with, the 'fun' element of the simulation-based learning can be encouraged. It is worth noting the importance of the 'fun' element, because this is a major differentiator of the simulation game from other forms of learning tools. Simulation games give participants enthusiasm and motivation (Feinstein *et al*., 2002), resulting in their active involvement and leading to a deep learning process (Biggs, 1999).

At the International College of Tourism and Hotel Management (ICTHM), in Sydney Australia, where the case study is based, a maximum of 30 students per class is admitted per session, which in trimesters of a larger intake means that up to three separate sessions are conducted. The student teams vary from three to five persons, with four being the optimal size. An interactive activity is organised in week one of the term in order to create the teams. In this activity, students are asked to take a place along a wall of the classroom to represent where their response to each of a number of questions fits on a continuum. For example, students are asked when they like to submit assignments - from long before submission date to last minute submissions – or what grade they are expecting to achieve – from a high distinction to a pass. Other similar questions are asked and the students are asked to observe which peers they are standing close to at the lines of the continuum, as those peers would appear to have similar aspirations for the subject.

When a comprehensive management simulation is used, simulation-based learning can integrate a wide range of knowledge and skills. A management simulation game such as HOTS often requires participants to employ knowledge gained from other courses in the simulation. Thus the simulation develops integrative decision-making skills. This is as opposed to the traditional modular or subject-based courses, where "students tend to treat each area of study as a separate entity that has little

relation to the others, and file the knowledge gained into separate conceptual pigeonholes" (Fawcett and Lockwood, 2000: 264). Depending on participants' education levels, the type of simulation and its complexity, the area covered can include the elements of marketing, finance, human resources, and any other modules as appropriate. This aspect is discussed again later in this paper.

Constraints of Simulation-Based Learning

The major weakness that has often been reported of simulations is its reality and validity. Wolfe (1976) stated that the simulated environment might not duplicate a real business situation and so could lack validity. In such a case, simulations can mislead the participants, causing them to misunderstand incorrect habits as the reality. As a solution, Burgess *et al.* (cited in Hely and Jarvis, 1999) suggested increasing the simulation complexity by adjusting factors such as the number of decisions to be made. In contrast with this, Fripp (1993: 31) argues:

> "No simulation can ever be totally *realistic*, no matter how complex it is. Complexity is not a substitute for reality. The most important thing is the extent to which participants believe the simulation to be a *valid* activity."

The complexity of the simulation can actually be a constraint, since such complexity makes it difficult for participants to conceptualise the relationship between cause and effect. Complexity can also be a demotivating factor for participants' active involvement and voluntary learning. The appropriate level of complexity should depend on participants' abilities to understand the system or situation. For instance, in undergraduate studies, a particular business simulation game may be quite appropriate for third-year students but too complex for first-year students. Green (2002) reported that when participants are confident with the mechanics of how the simulation is played, the likely learning outcome will be more favourable, with participants gaining an understanding of the concept that the simulation is designed to deliver. Thus the learning would be most effective using simulations simple enough for participants to easily understand both system and concept.

The role of the simulation administrator is critical in simulation-based learning. Like lecturers for traditional classroom teaching, the administrator needs to be familiar with the education tool being used. If the simulation is tailor-made for the particular organisation where the simulation-based learning is implemented, or if the administrator is also the simulation designer, their understanding of the simulated environment should be adequate. Otherwise, the administrator needs to invest a fair amount of time to become totally familiar with the simulation. As discussed above, despite the definition, simulations may not represent the real business environment. In such cases, it is essential for the administrator to clearly communicate to the participants which areas within the simulation might not be realistic. At that stage, a class discussion could be generated to examine the validity of the simulated environment and this can further develop participants' insights on the simulated environment.

Another constraint with using simulations in a curriculum is the assessment method. Many researchers concluded that performing best in a simulation game does not necessarily mean achieving the best learning outcome and, in fact, there is no significant correlation between the performance in the simulation and learning (Anderson and Lawton, 1992; Gopinath and Sawyer, 1999; Thorngate and Carroll, 1987). According to Gilgeous and D'Cruz (cited in Doyle and Brown, 2000: 332), those participants who played best in the simulation game might have just "hit on the correct strategy" without considering the consequences of their decisions made in the simulation. Gopinath and Sawyer (1999) also reported that it is still possible to achieve a satisfactory level of performance with a random decision-making method. This is particularly true with the use of scenario-based simulations, where the input often takes the form of multiple-choice. This form of input narrows the freedom of decisions that a participant can make, thus it is more likely that the participant could 'hit' the correct answer. In addition, the right decisions might not result in the best performance in the simulated environment if there are doubts about the simulation's validity, as discussed above.

HOTS Evolution at ICTHM

HOTS is offered in the sixth trimester of studies at ICTHM, in the second year of a Bachelors degree (course). The module has been offered since the beginning of the College's operations and is a part of the Swiss syllabus that the studies are based on, but in 2000, after two years of operation, it was at risk of being removed from the course offerings. This case study examines what has been done to the module, without changing the infrastructure of the simulation or changing the syllabus of the course, to transform the module from one about to be dismissed, to its becoming a showcase for the institution while, at the same time, functioning as a benchmark for new programme developments.

A range of lecturers had taught HOTS in its earlier stages at ICTHM, coming from different backgrounds, and each bringing their specific expertise to the course. In August 2000, propositions were finally laid for evaluating the utility of the module. Students that had taken the module had complained about wasting time and money going through the simulation. They felt nothing new had been learned, and constant problems with the computers running the simulation additionally increased the frustration.

A large IT equipment upgrade was made in early 2000, and two new lecturers were appointed for the term starting in October of that year. The lecturers chosen came from two different backgrounds. One was a former Food and Beverage Manager, with international experience from Europe and Australia, and experience in cost control. The other lecturer came from a rooms-division perspective, with experience of working in both hotel front and back office in Europe and America, and additionally working in a time-share business. These lecturers' strengths in different fields made the division of assignment marking easy. The former concentrated on numerical assignments such as the forecasting sections, annual reporting and budgeting. The latter took on the marketing and human resources aspects of the business plan and forming and consulting with groups in the module.

The value of team teaching is that lecturers can concentrate on making the subject a more valuable experience for the students. There is no separate teacher/tutor system at ICTHM – each lecturer is responsible for marking all assessments set in their subject. A minimum of three assessments are undertaken in each subject. This results in a heavy staff assessment load. In order to reduce this, lecturers sometimes choose group assignments or multiple-choice questions (MCQ), where they may not be appropriate and MCQs have an inherent danger of promoting a surface learning approach (Paxton, 2000).

Some aspects of the simulation are not compatible with the module objectives, because it was originally built for an American environment. The way to make the simulation a relevant learning tool is, however, through the fact that grades are not solely dependent on success in the simulation. The students are assessed through the reports and plans they produce, based on the simulation but set up by the lecturer, who also assesses them. Were the lecturer not to mark any assignments, but rather rely on success in the simulation as proof of learning, then the simulation might actually conflict with the teaching in class. The students would be confused and either the lecturer or the simulation could lose credibility.

After becoming accustomed to the simulation over two terms, and fighting the large number of 'bugs' and 'glitches' in the programme, a positive development was the release of a new version. After another term of getting to know the new simulation features, attempts were made at reconfiguring the simulation. The simulation can be set up to operate in either UK or USA modes, each being useful to the international students from those areas. However, this fights the logic of the majority of learning at ICTHM, as well as the fact of its being situated in the Southern Hemisphere. The seasons in the simulation are obviously the wrong way around, while prices, and staffing requirements, are not as the students have experienced them in the Australian context.

The lecturers took up the challenge of changing the simulation parameters on their own, as the company providing the software did not have any ready solutions to the problem. Now, some years down the track, six different settings have been created. This gives the students a different

background document each term, places their property in different parts of the Australian continent, and has seasons, market research, and menus created to suit local standards.

It was seen as a logical decision to offer a simulation module to integrate practical elements of Swiss hotel education (provided in the initial year of the programme) with contemporary higher education subjects that are, at times, abstract in the later years of the programme. The reason why the simulations were not successful initially was unclear until the assessment scheme moved away from assessing the product to assessing the learning experience or process. It was then that the value of the subject became apparent.

Experiential learning process and assessment method

To assess participants' learning progress, or to facilitate their learning, it is necessary to understand the learning process occurring within the simulation-based learning. A simulation-based learning process is best described by Kolb's experiential learning model (Fawcett, 2002; Gopinath and Sawyer, 1999; Kolb, 1984). Experiential learning goes through a cycle that consists of four steps – *experimentation*, *experience*, *observation* and *conceptualisation*. In applying this model to simulation-based learning, the four steps are explained below.

The *experimentation* stage is where participants plan for the next action, by individual thinking or group discussion, for example. At this stage, participants analyse the current situation and look for the possible best decisions for the next phase. The *experience* stage is the action stage. All the decisions are put together for data processing. In computer-based simulations, it is usually the computer, not the participants or the administrator, that takes the action (calculations for data processing). In contrast, with non-computer-based simulations, such as those conducted mainly with the use of cards and role-play, the interaction between participants is explained as the action.

At the next stage, the cause (data input) and effect (data output) relationship is *observed* immediately after the data processing through the computer or, in the case of non-computer-based simulations, observation may occur through the action. This quick, almost simultaneous feedback is one of the advantages of simulations over other experiential learning tools, such as case studies and consultancy projects.

Without having to wait for the lecturer to give feedback, participants can start analysing the output data and *conceptualise* the cause-effect relationship. Characteristically, simulation-based learning again differs from other education tools in its continuity. Simulations allow the users to plan for the next action after the conceptualisation stage, providing opportunities to achieve better results and to enhance their decision-making skills at each round.

Of those four stages, the assessment of participants' learning progress should focus on the experimentation and conceptualisation stages – how they plan for the action, what conclusions they draw and, most importantly, how they plan for the next action based on the conclusion from the previous round. To assess participants at these learning stages, it would be most appropriate to require participants to produce reports. Ideally, the report should justify their decisions at each stage, before participants take each action. This should be followed by another report, after the analysis of the output, to show the participants' understanding of the cause-effect relationship. If the simulation consists of many phases to be completed within a relatively short time, making it difficult to generate many reports, analysis of some phases may be bundled together. When a comprehensive management simulation is used, these reports can take the form of business plans or annual reports to mimic the real business situation. This approach also gives participants opportunities to practise their understanding of how different areas of the business are interrelated (Fripp, 1993).

Course structure

In addition to *assessment*, the administrator plays a significant role when *structuring* a course that includes simulation-based learning. Basically, there are three components required to run a

simulation-based session: *briefing* at the beginning of the session; the actual *implementation* of the simulation; and the *feedback* part.

At the stage of briefing, the learning objectives and assessment criteria must be communicated as in other conventional lectures. Additionally, the administrator should explain any concerns about the reality of the simulation so that participants are not misled by unrealistic decisions made for the unrealistic situations. Another point to be emphasised at the briefing stage is the importance of familiarising the participants with the mechanics of the simulation and helping them understand how the simulation is played. According to Green (2002), participants tend to put more effort into the simulation when they understand how it works and are confident with the mechanics of it. It increases the likelihood of their better playing the simulation and understanding what it is designed to teach. Understanding the mechanics is also important in order to avoid potential technical failures.

The actual *implementation* of the simulation is the major part of the simulation course. The role of the administrator at this stage need not be active involvement because, by this time, participants should be able to run the simulation themselves, and so the experiential learning takes place. The involvement of the simulation administrator, therefore, is to ensure the smooth operation of the simulation.

In simulation-based learning, *feedback* on decisions is automatically and continuously given to the participants as the simulation proceeds; thus the purpose of having feedback sessions is mainly to facilitate participants' conceptualisation of the simulated environment and consolidation of the learning experience. If the simulation is played in the game context, where participants are competing against each other, their performances may be compared to stimulate their interest and motivation. Ferreira (1997) reported that participants' decision-making skills improved when they were informed of their competitors' performance. Participants' presentations about the business results are probably the most accepted way to conclude the course, thereby letting participants reflect on the overall simulation experience.

Applications of Simulations in a Curriculum

It can be assumed that the use of simulations has been increasing as the infrastructure for their use for educational purposes has improved considerably in the last six years. Past studies on simulations have proved their effectiveness and have explored further improvements in their application. Advances in computer technology have made high performance computer hardware widely available at relatively low cost for educational institutions, and there is more sophisticated simulation software to be found in the market. Even though it is said that simulations are most effective when tailor-made (Fripp, 1993), off-the-shelf simulations still have much potential to contribute more to hospitality management education. In fact, the increasing variety of simulations has made it possible to utilise them at several stages in a hospitality management curriculum.

In his book, Fripp (1993) introduced some approaches to using simulations in a curriculum. Of those, the most significant three approaches are the: *introductory approach, practical example approach* and *integrating approach*. The *introductory approach* can be taken at the initial part of a curriculum for team building, as simulations are often effective for development of group skills. For this purpose, a simulation that has an element of entertainment is recommended in order to stimulate participants' motivation. This approach can also be used for the acquisition of knowledge, such as basic ideas about business dynamics, and understanding the terminologies used in that simulated environment. At this point, Whiteley and Faria (1989) argue that simulations are effective only in improving quantitative skills, but not in the acquisition of applied or theoretical knowledge. This statement is valid if the simulation requires its participants to deal with numeric data to a large extent. However, it is possible to use simulations to develop theoretical knowledge, depending on the design of the simulation.

Scenario-based simulations would be one type of simulation effective in the acquisition of knowledge. A scenario-based simulation consists of a large amount of qualitative information that needs to be

analysed for each scenario in order to make a correct decision for the given situation. The unique point with such scenario-based simulations is that each scenario is usually gone through only once, and then the participant moves to the next scenario, which represents a different situation. This means that the participant cannot plan for the next action based on the conclusions drawn the previous action. Thus the automatic experiential learning does not take place between the conceptualisation stage and the experiment stage. Therefore, the programme has to give the feedback for that particular scenario, to explain whether the decision for that scenario was successful or unsuccessful, and what decision should have been made. This feedback part acts as a knowledge base from which the participant can gain theoretical knowledge. In a sense, these scenario-based simulations work similarly to the reading of textbooks, and answering of questions at the end of each chapter, with the lecturer explaining whether the answers were correct or incorrect.

The *practical example approach* is probably a more common way to utilise simulations in educational contexts. This approach is taken to complement conventional classroom lectures by allowing students to put into practice what they have learned in the previous classes. In order to develop students' specialised skills, module-specific simulations would be most effective because of the depth and the detail of the environment that module specific simulations can deliver. A good example of those ad hoc simulations would be Hotel Front Office Simulation (2003), through which students can carry out reservation handling, guest portfolio management, property management systems, and night auditing.

The *integrating approach* is similar to the practical example approach but it uses cross-modular simulations, such as management-simulation games, to focus particularly on comprehensive understanding of concepts of the simulated industry, and on development of integrative decision-making skills. HOTS is one such management-simulation game for the hospitality industry. It simulates the operation of a mid-sized hotel; participants are required to make decisions for a number of fields such as room rate, yield management, price setting for food and beverage products, advertisements, and capital investments for the installation/expansion of the facility. Participants are also required to analyse the market situation based on the market information given by the programme or the administrator. The results of the actions are shown on financial statements, thus the participants can develop their practical accountancy skills. To achieve the most desirable learning outcome through such comprehensive simulations, the integrating approach expects participants to have a certain level of understanding of the components of the simulated environment. Therefore this approach is ideally taken towards the end of the curriculum, after students have completed the related courses. Management simulation games often are, by their nature, more complex than module specific simulations, hence it can be time consuming, particularly at the briefing stage, to familiarise the participants with the simulation system. It should be noted that whichever approach is used, the type of simulation and the learning objective need to match, and the administrator must know the strengths and limitations of the simulation so that conventional classroom learning can offset such limitations, or can be complemented by the simulation's strengths.

Assessments used for the HOTS course at ICTHM

The assessments that are currently used in HOTS are spread over twelve of the fourteen weeks of the term. This leaves only Week 1 for introductions and Week 14 (student exam week) without any assessable item. The negative aspect of this is that the assessments are time-consuming, both for students to prepare, and for the lecturers to correct and give feedback on. There is almost no break in the term, and a common comment on the course feedback form has been students asking the College to add credits for the module, as it is more challenging than other modules in the same term. It is a positive sign that the students are not, as a rule, asking for less work within the unit, but rather to keep the current content, whilst at the same time raising its value in credit terms. All assessable items are returned within seven days of submission in class and general feedback is given to the whole class initially. Each team is then given between ten and twenty minutes of consultation time with the staff member who marked that assignment and written comments are also made in the assignments. The positive aspect of the high number of assessments is that the students are getting lots of formative assessment feedback during the term. They can follow their own progress in the subject, learn and correct themselves in preparation for later, more valuable assessments.

The positive aspect from the lecturers' point of view is that the simulation the subject is based around becomes more of a facilitating factor – not so much the end as a means – of the subject. A simulation is only realistic in terms of how the decisions made would work out in the real world. It is, therefore, satisfying that students who are achieving good results in the simulation, as well as those achieving poorer results, are all learning equal amounts of the actual aims of the course, e.g. to forecast, to manage budgets, and to report on a timely basis.

Before students get involved in the computer-simulation environment of HOTS they need to become familiar with the business they will run, including its historical data, and do a small quiz which makes up 10 percent of the final marks for the course. The quiz is constructed to elicit lots of the information provided in the background document. The questions are written to force students to reflect on what the data means in a wider context rather than simply be descriptive. For example, "your head chef and reservations clerk have recently left the company. Name two factors why this might be detrimental to your future success, and two factors why it might be beneficial to the company". By taking students out of the normal mode of testing right from the beginning and, instead, into a reflective mode, the scene is set for a different learning environment.

The subsequent assignment that the participants submit is a draft business plan in Week 4. Lectures on what business plans should contain, as well as on how to integrate knowledge from the simulation background and from the business world the students are about to enter, are held in Weeks 2 and 3. The draft is corrected and handed back in Week 5 with lots of constructive feedback written both in the draft and on a separate marking sheet. A final business plan, worth 20 percent of the final mark, is then due in Week 6. The fast tempo forces participants through the whole Kolb learning cycle where they experiment with a draft business plan, experience the actual application of it, observe the feedback from the lecturer and finally, conceptualise their understanding of it when comparing lecture notes, textbook suggestions, and their own work, in order to produce a final plan.

Participants are involved in the running of the simulation from Week 4, and by Week 6 they have experienced a full year, twelve months of decision-making, in the simulation. They are at this stage given a lesson on how to create an annual report, including financial reporting for the past year, a forecast for the following year, and a comparison, based on seven key indicators, between their property and those of their peers, which are posted on the College's instructional internet site. A draft annual report is due in Week 7. This is handed back with a similar amount of feedback as the business plan in Week 8. The assessed annual reports are then due in Weeks 9, 11, and 13, with feedback given on each the following week. The lecturers always return assignments with both verbal and written feedback, and at times up to twenty minutes are spent with separate groups in order to explain how they could improve their reports for the following round.

Assignments within the course are all built to test how well the students can apply theoretical concepts, and analyse decisions and situations, in the simulated environment. The actual success of the property is less important. The reason for this is that students who understand what the decisions they are making mean in a larger context mostly also know how to correct possible mistakes in the process. If they continue to write excellent reports on intentions and expectations, while at the same time are not succeeding in the simulation, they will not be penalised for the outcome – this is not what the learning is about.

A common complaint with learning based on group work is that some individuals do not do their fair share of the work. It was also found that some participants did not understand the rationale behind experiential learning and felt that the only 'true' way of learning comes through lectures and exams. In order to counter these perceptions, two final assessment tasks have been added. For the first assessment, participants write their own reflective journal throughout the duration of the course. One of the lecturers randomly collects journals each week and hands them back the following week, with constructive feedback as needed. A final version of the journal is submitted in Week 13 and is then marked and weighted at 10 percent of the final mark. The journal gives the lecturers a chance to see the reality of the learning experience from a participant point of view. If necessary, it also gives an

opportunity for the lecturers to intervene in non-cohesive groups, or explain to the participant the rationale for some features that have appeared in the journal text.

The final assessment task is, like the previous one, individual, and consists of an oral interview. The interview is held in Week 12 and conducted by the two course lecturers (and taped for re-confirmation purposes). It consists essentially of five questions from any part of the course (except for the initial background document). The questions are formed to compel the participants to know each part of the business plan, the annual reports, and the running of the simulation. The structure of the questions is again aimed at determining if the participants have conceptualised the material rather than simply having memorised information without understanding it.

Conclusions

Simulations are widely used tools in today's management education. Advances in computer technology have made a variety of sophisticated simulations available to academic institutions. There are many benefits of simulation-based learning that are difficult to deliver through conventional classroom lectures. Simulation-based learning is particularly effective in the development of decision-making skills. In addition, when the simulation is conducted in a gaming situation with group work involved, the 'fun' element of the simulation game motivates and enthuses the participants, and the ability to work in a team is well developed. The major constraints often discussed of simulations are their reality, validity, and complexity. In addition, assessment of participants' learning progress is difficult because participants' performance in the simulated environment does not always correlate to their learning outcomes. Therefore, it is essential to understand the principles of the experiential learning process that occurs within simulation-based learning in order to correctly assess the participants' learning progress. There are many possible ways to implement simulations in the hospitality management curriculum, but it is always important to structure the course in ways that facilitate the experiential learning processes, to have sufficient briefing sessions to maximise participants' understanding of the system, and to choose suitable simulation programmes to achieve the most desirable learning outcomes.

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