Second Life
New opportunity for higher educational institutions

Bachelor thesis within Business Administration

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Yours sincerely,

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Executive summary

Background: Virtual worlds such as Second Life have been used in the corporate world for a few years now. However, it is only recently that higher educational institutions have seen the marketing and educational potential inside this world. Several hundred universities around the world are currently involved in Second Life and a majority of them give fully accredited academic courses inside SL. As traditional distance learning can sometimes be interpreted as low on interactions, SL represents a new means for interactive distance learning.

Purpose: The purpose of this study is to explore if, why and to what extent Second Life can be used as a marketing and pedagogical tool within higher educational institutions.

Method: A mixed qualitative and quantitative method was utilized in this study. For the qualitative side: in-depth interviews with SL teachers from five universities around the world were held and these were complemented by observations at educational institutions inside SL. For the quantitative side: a questionnaire was designed and sent out to 50 SL-students. This primary data have been combined with appropriate secondary data concerning distance learning and education within SL.

Theoretical framework: The theoretical framework can be divided into two main sections: a marketing section with primarily service management theories and a pedagogical section where cognitive apprenticeship theory is applied.

Conclusion: Higher educational institutions can use SL to promote their schools to prospective students and to other stakeholders such as new teacher recruits. All of the universities that were under our scrutiny felt SL had strengthened their university’s brand. Furthermore, SL represents an opportunity for universities that are looking to increase collaborations with other international universities and who are interested in enhancing the public image of themselves as pioneering and global universities. Therefore, it is highly advisable that a university such as JIBS enters SL, if not on pedagogical reasons then on strategic and marketing reasons. In general, a majority of the students interviewed were satisfied or very satisfied with the quality of the SL-courses they had taken and an overwhelming majority would recommend SL-courses to other students. The empirical findings showed that the most frequent courses taken within SL are design courses, although no limits were perceived to exist of which courses that can be held within SL. A majority of the students also felt SL aided their learning experience. However, due to some of the current flaws of SL – such as the slow graphics and the high demands of computer hardware – SL should be viewed mainly as a learning tool that complements, rather than substitutes other current educational forms.
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Definitions

- Alphaworld: An Internet based virtual world launched 1995 and one of the oldest virtual worlds (Eliens, Feldberg, Konijn, & Compter, 2007).
- Delta 3D: Is an open source project used within game engines for simulation applications (Eliens, Feldberg, Konijn, & Compter, 2007).
- Linden dollars (L$): The currency used within Second Life, can be exchanged for real money (Second Life, 2007).
- Second Life (SL): An Internet based virtual world launched in 2003 by Linden Research or Linden Lab (Second Life, 2007).
- Virtual reality: Technology that allows a user to interact with a computer simulated environment (Shaffer, 2002).
- 3D world: A computer-simulated environment, which the user is supposed to inhabit or interact within (Durand D. 1994).
1 Introduction

The following segment will introduce the growing phenomenon of the virtual world Second Life and its corporate as well as its pedagogical opportunities. A problem discussion and a purpose statement will follow this.

1.1 Background

1.1.1 3D-virtual reality applications

Virtual reality programs have increased in popularity over the years and serve as a tool in a number of different areas such as entertainment, medicine and the business world. Virtual reality is here defined as “…technology that allows a user to interact with a computer-simulated environment…” (Shaffer, 2002). In alignment with the technological development virtual reality programs have grown more complex and today complete virtual reality worlds such as the one we see in Second Life are attracting a growing number of users.

1.1.2 Second Life

Second Life is a virtual community created in 2003 by Linden Lab in which users, or residents as they are also referred as, can interact through their motional avatars (See Figure 1-1) in virtual environments. Second Life allows its residents to freely socialize, participate in individual or group activities as well as create and trade services and items (Second Life, 2007).

The developers of Second Life have tried to emulate everything that can be found in real life and bring it to the residents of Second Life. For instance, the residents of Second Life have their own currency called Linden Dollars (L$) and it can be exchanged for real world currencies in a resident-to-resident marketplace, facilitated by Linden Research (Second Life, 2007).

Over 20 million users have opened up accounts at Second Life – although it’s estimated that only 100 000 of the accounts are currently active. But what is perhaps more intriguing are the increasing number of real life companies, educational institutions and governmental institutions such as embassies which have moved into Second Life. The Maldives for instance, were the first country to open up an embassy in Second Life where visitors can meet up computer generated ambassadors regarding visa issues (Erlandsson, 2007).

In May 2007, Sweden became the second country to open up an embassy in Second Life. However, rather than serving as a complementary method for Swedish citizens to handle visa issues, the Swedish embassy mostly serves as a promoter of Swedish culture and image (Erlandsson, 2007). Yet, Sweden does not seem to take the possibilities within Second Life lightly, as during the opening ceremony of the Swedish embassy in Second Life, Swedish foreign minister Carl Bildt took part. Bildt was asked to comment on whether politics could play a role in Second Life and he responded:
“Internet has affected politics tremendously. The “bloggers” did it and in America, YouTube for instance, has turned into an important factor ahead of the elections. I think Second Life will be able to play a similar role in the future”, (Erlandsson, 2007).

1.1.3 Second Life and business opportunities

Global companies such as Adidas, Apple, Toyota and the news agency Reuters are just a few of the companies who have moved into Second Life. Adidas even sell some of their clothes and shoes through Second Life and Toyota use Second Life as a showroom for some of their cars. Reuters has a news reporter on one of the Second Life islands with the sole task of reporting news and events that take place on the island to other residents (Terdiman, 2006). Inevitably, companies see the potential in Second Life, especially from a marketing point of view. Marketing in socially interactive 3D-worlds such as in Second Life has even gone so far that the phenomenon has got its own name: avatar-based marketing. The phenomenon is about that the avatar carries the organisations message. The avatar-based marketing is about targeting avatars created by the users psyche to make them consume the products (Harvard Business Review, 2006). As Bonita Stewart, in charge of the interactive marketing of DaimlerChrysler states:

“When marketing online, you want sustained engagement with the brand rather than just a click-through to a purchase or product information. Avatars create an opportunity for just this type of engagement”, (Harvard Business Review, 2006).

1.1.4 Second Life and e-pedagogical opportunities

A series of educational institutions such as Harvard University, Princeton University and Sweden’s own Kalmar University have started to realize the pedagogical potential in Second Life and now offer online courses in this virtual reality world. Universities either rent or build their own islands in order to ensure privacy, and then set up virtual lectures in which teachers and students can communicate in real time using instant chatting or microphones. Harvard University, one of the universities that perhaps have gone the furthest when it comes to bringing education into the virtual world, now offer law courses to geographically dispersed students from all over the world (Harvard Business Review, 2006).

In general, the Second Life’s educational phenomenon seem to be mostly concentrated around North America where around 100 universities have already gotten involved in one way or the other – either by offering full scale courses with credits or just showcasing their university campus. Kalmar University was the first, and so far the only university in Sweden that offer courses in Second Life. Their entry into Second Life was in joint conjunction with the University of Molde and the University of Central Missouri. Together, the three universities built their own island in Second Life, called Kamimo, which they utilize as a virtual classroom (University of Molde, 2007).

The three universities have outsourced the design and build of the virtual buildings to subcontractors and the island was opened for visitors on September 21st, 2007. Kalmar followed this up with a pilot course offered in Social English using a mixed approach with four in-world Second Life sessions and a few sessions outside Second Life (University of Molde, 2007).

1.2 Problem Discussion

Higher educational institutions have for some time been offering distance courses online for students that for one reason or another cannot be physically present in classrooms. Due
to its cost-effective benefits and the flexibility it offers, distance learning is attracting more students than ever. In the United States alone, 81% of all higher educational institutions offered at least one fully or blended online course by the year 2002 (Sloan survey of online learning, 2002). The same pattern can be found in Sweden where in 2006 it was reported that 25% of the total college-student population took an online or a mixed online course (SCB, 2006). Despite its popularity, distance learning has been criticized for the limited opportunities of face-to-face interactions it offers as well as its lack of communication between students and teachers in real-time (Liu, 2008).

The emergence of virtual worlds in pedagogical contexts tries to combine avatar-based interaction without losing out on the flexibility benefits traditional distance learning offers. Using Second Life for educational purposes is a relatively new phenomenon. Yet, it has received its share of publicity in the media with newspapers, network channels and websites flooding the matter with articles, insights and attention. However, it’s suitability as a pedagogical tool has yet to be assessed to a greater extent, mainly due to its novelty. Furthermore, although there is a wide research framework already available on businesses using Second Life for various marketing purposes, its marketing implications for universities have yet to be touched upon on a wider scale.

Thus, universities who are considering entering Second Life and want to assess Second Life’s appropriateness as a new means for teaching and/or marketing activities currently do not have a very solid research backbone to base their decisions on. This quandary has created the basic incentive for this study. The reason for why Second Life as a virtual world was chosen for scrutiny and not any of the other worlds was due to its highest number of users compared to the other worlds.

1.3 Purpose

To explore if, why, and to what extent Second Life can be used as a marketing and pedagogical tool within higher educational institutions.
1.4 **Research Questions**

In order to fulfil the purpose the following research questions will be dealt with:

Based on the number of universities that have decided to enter SL today (Jennings & Collins 2007).

- **What are the opportunities and threats of implementing SL at higher educational institutions?**

Due to the criticism towards more traditional distance education (Liu, 2008).

- **To what extent can SL provide value for education?**
- **Which courses are more suitable to teach within SL?**

Due to the publicity that organisations have received in media by entering SL (Erlandsson 2007).

- **How can universities use SL for marketing purposes?**

As the authors are students at Jönköping International Business School:

- **What opportunities does an implementation of SL provide for Jönköping International Business School?**

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Figure 1-2 *Research questions*

Figure 1-3 *Managerial Implication*
1.5 Perspective
The perspective of this study will be looked upon from the universities’ perspective and what could be beneficial for them. Within the university there are different stakeholders such as teachers, administrators and students. What is important is that it is looked upon from how the universities would gain by using SL as part of their educational program.

1.6 Delimitation
Only universities, which have implemented Second Life and conduct Second Life courses or have conducted courses in the past, will be investigated. However since there are more than 1000 universities (John Lester, 2008-04-13, personal communication) currently using SL in one way or another and with the time frame and resources available, examining all of these universities will not be feasible. Furthermore, this study will not go in depth on the technical aspects and prerequisites needed in order to implement SL.

2 Frame of reference
In this section previous research is presented. Furthermore, the relevant theories are described and discussed, which are used as a framework for this thesis. These theories are later used to analyse the empirical results.

2.1 Previous research
Sunny Liu from the University of Southern California investigated the current status of traditional distance learning in a phenomenological study in 2008. Distance learning was here identified as “learning with the help of technology”, typically in the form of using a web client or web conference. She addressed issues fundamental for a successful distance learning environment such as student interactions and more importantly, the students’ perception of the same interactions. In-depth interviews with instructors and distance learning students in multiple sessions were held in order to map out the current status of the interactivity. She concluded that the students were not only dissatisfied with the extent of interaction with other students and instructors in the distance courses they had taken so far, but that this lack of interaction made them less willing to take further distance courses in the future. Reasons mentioned for this dissatisfaction were amongst others: lack of technology used in the course, teaching style of instructors and course design. Liu further concluded however, that more and more educational institutions are progressively using more advanced technological devices in their distance courses. This can perhaps somewhat explain the paradox of the increased popularity of distance courses at higher educational institutions. Figures of this trend could be found in the same study although these were restricted to only American schools: 1.6 million students took at least one online course in 2002 and that figure increased in 2003, 2004 and 2005 with 1.98, 2.35 and 3.2 million students respectively (Liu, 2008).

Since the entrance of Second Life, a lot of research has been devoted to what benefits interaction in 3D-worlds can bring to the users. Much focus is placed upon how this type of communication is affecting people’s social Behaviour. Although SL is created to be a reflection of the real world it is much more complex than that. The border with the real world and the created world become distorted as people spend more and more time within SL and meet people they would never meet in real life (Seryte & Storgaard, 2007).
New Media Consortium (NMC), a collaboration of educational institutions researching new mediums and technologies, conducts a comprehensive survey each spring in order to capture information on activities, attitudes and interests of educators active in SL. In the 2007 survey, 209 educators and students filled out their annual questionnaire. Some of the findings are noteworthy and could add value to this study. For instance, when asked “describe your most positive experience in Second Life” 45% answered “meeting new people, expanding networks and rich interactions”. This was followed by the second most frequent answer “attending education events/learning in SL”. In contrast, “technical problems” was identified as the worst experience they have had in SL. Furthermore, based on their experiences the respondents were asked to rank the educational potentials of SL. Over 50% deemed SL to have a high or rather high potential for teaching full courses. Over 80% also felt that the potential for simulation activities/scenario based training within SL was high or rather high. Additionally, when given a number of variables and asked to what extent they associate these characteristics with SL the following outcome could be read:

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<td>Engaging</td>
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<td>Interactive</td>
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<td>Easy to use</td>
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<tr>
<td>Realistic</td>
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<td>30 %</td>
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<tr>
<td>Social</td>
<td>2 %</td>
<td>6 %</td>
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<td>39 %</td>
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<tr>
<td>Global</td>
<td>2 %</td>
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<td>33 %</td>
<td>44 %</td>
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<tr>
<td>Group work/collaboration</td>
<td>1 %</td>
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Table 2-1 Perceived potential for Second Life in different fields (NMC 2008)

As can be seen, the interactive factor followed by the engagement, social and global implications of SL had high answer frequencies. It must be noted however, that the respondents are educators and students who are currently still active in SL and therefore their answers may have some elements of biasness.

SL is an environment that is in constant change. The progress with improvements in technique and computer capability has made it possible for more and more universities to investigate the possible benefits of offering their students courses within SL as well. According to Cheal (2007) SL offers several possibilities for all participants to add content to classes. Compared to traditional learning, SL offers information that has the possibility to be more experimental based. Much of the research has although not yet been statistically proved and is often based on personal experiences.

Recent studies have shown that libraries within SL have become popular. According to Grassian & Trueman (2006) librarians can act within SL with the advantage of getting an increased collaboration with other educators and libraries. Today many libraries offer chat functions between the students and librarians, SL can then be seen as an extension of this.
More research in this field is although needed to be able to tell if this is more effective than the traditional way.

Although SL currently is the most popular virtual world it does not necessarily need to be the most suitable for universities. Prior to launching SL, Virje University of Amsterdam made some benchmarking of other virtual worlds and came up with the following (Eliens, Feldberg, Konijn, & Compter, 2007):

Current major online worlds:

- Alpha World
- Blaxcom Community server
- There.com
- Delta 3D

Compared to the other virtual worlds, Second Life has the advantage of offering a relatively easy way of designing buildings, changing avatar appearance and interaction between its citizens. Some setbacks it has compared to the other worlds are that it is perceived to be much slower. Opportunities within SL are perceived to be that a new type of online learning could be conducted. Emphasis in this study was the experimental type of learning or the usage of pedagogical games (Eliens, Feldberg, Konijn, & Compter, 2007).

Jennings and Collins (2007) did a study on educational institutions in Second Life and concluded that by 2011, 80 per cent of all active Internet users will participate in virtual worlds, such as Second Life. In this study, educational institutions were classified according to their willingness or reluctance to try new technological tools in education. Universities were labelled as “innovators”, “early adopters”, “early majority”, “late majority” and “laggards”. Universities currently inside Second Life were seen as innovators or early adopters and were characterized by their interest in the new technology itself as well as their risk-taking in applying interdisciplinary approaches to teaching, learning and research.

There are often conflicting reports on actually how many universities who have implemented Second Life within their educational programs. Jennings and Collins states that in order for a university to be deemed to have a qualified presence in Second Life they must have occupied a virtual location inside Second Life (through the purchase or rental of an island for instance) or they must maintain a “group” in SL. In their study, they used a semi official list of educational institutions that claim to have a presence in Second Life and concluded that 115 universities have some form of existence in SL. However, according to Linden Lab this figure is understated and this number should be more than three folded (John Lester, 2008-04-13, personal communication). However, there are some limitations to these figures due to the fact that the lists found on the Web are constantly increasing. Furthermore, there is the requirement of a special “tax” schools need to pay to Linden Lab in order to appear on the internal search function inside SL (Jennings and Collins, 2007).

A brief description of the land usage could also be found in the Jennings and Collins (2007) study where auditoriums and so called “sandboxes” where students can create objects – together take up over 70 per cent of educational institutions virtual space in SL. It is also noteworthy to mention that hybrid classes – a mixture of classes in SL and in real life – was the most commonly used activity by educational institutions in SL; 25 per cent of the educational institutions were reported to have this kind of activity (Jennings and Collins, 2007).
2.2 Theoretical framework

The main focus of the theoretical framework will be concentrated around service management and marketing theories, in addition to some pedagogical theories. Universities are very much service providers in the sense that they provide education to students, which can be seen as their customers and teachers their employees. And thus a service management framework for this study is applicable and relevant.

According to Grönroos (2007) services are processes consisting of activities or a series of activities, which are at least to some extent produced and consumed simultaneously and where the customer participates as a co-producer in the service production process at least to some degree. According to Gummesson (2002) relationship marketing is marketing which puts relations, networks, and interaction in focus. Thus, the relationship marketing includes relationships with other stakeholders, both inside and outside the organization.

2.2.1 Service marketing triangle

The Service Marketing Triangle model as seen in Figure 2-1 is presented in order to show the three marketing functions, which are important for organisations offering services. The three marketing functions are internal marketing, interactive marketing and external marketing (Grönroos, 2007). The model is presented in order to investigate how universities can use SL for marketing purposes.

Unlike the traditional marketing model (firm, product, market), the service-marketing triangle involves firm, customers and personnel (Grönroos, 2007). It is the firm, which initiates the service process by offering a service to customers.

![Figure 2-1. Service-marketing triangle (Grönroos, 2007)](image-url)

Figure 2-1 depicts the service marketing triangle in its general form. In the context of this study, the firm on top of the triangle can be replaced with the university name, the customers with students of that university and the employees with teachers and faculty.

The firm is the management including full-time marketers and salespeople who give promises to the customers and have to enable the promise through continuous development and internal marketing with their employees (Grönroos, 2007). This internal marketing is a prerequisite for external and interactive marketing and can be reached through attractive and stimulating places of work, together with good internal communication (Zeithaml, Bitner & Gremler, 2006).
According to Gummesson (2002), the employees are those working in close contact to the customers, also called part-time marketers. They are the ones who conduct the interactive marketing. In this study the teachers play the most important role and are represented by the teachers and instructors in Second Life.

In order to investigate the relationship between students and teachers in SL, the paper will classify the service processes and will assess how and why virtual environments such as Second Life are to be implemented in the educational process. Customer relationships are becoming increasingly important for all kind of companies in order for them to differentiate themselves on the market (Gummesson, 2002). Relationship marketing in this study is presented with the relationship between teachers and students in a virtual environment. As relationship marketing is a mutual process of creating value for both customers and service provider (Grönroos, 2007), the value is created in interactions between the students and teachers. Thus, the quality of the interactions is to be discussed, how customers perceive them and how they can be improved. According to Grönroos (2007), the service quality is whatever the customer perceives it to be. That is why the service quality has to be identified the same way customers do.

2.2.2 Total Perceived Quality model

Total Perceived Quality model (Figure 2-2) is the customer’s perception of the overall quality of the service provided (Grönroos, 2007). Total perceived quality is an intangible, overall perception about the brand (Aaker, 1991). Expectations and experiences of both students and teachers from the respective universities will be assessed in order to get a full picture of how the service is perceived and thus, to help answering the research question “How can universities use SL for marketing purposes?”

According to Grönroos (2007), the quality of a service as it is perceived by customers has two dimensions: a technical or outcome dimension and a functional or process-related dimension. What customers receive in the interactions with the service providers is called the technical quality of the outcome. (Grönroos, 2007) It is what the customer is left with, when the service production process and its customer-provider interactions are over. However, the customer is also influenced by the way in which the technical quality is transferred to him or her. How customers receive the service and how they experience the simultaneous production and consumption process is another quality dimension. (Grönroos, 2007).

However, Rust & Oliver (1994) discussed the need for recognizing the physical environment where the interactions are taking place as a third dimension. Thus, the where perception is added to the what and how quality dimensions. This dimension is labelled servicescape quality, which consists of the physical resources, technology and other physical elements surrounding the service process (Bitner, 1992). Furthermore, servicescape helps to create the ambience of the service process. Thus, it is expected to have an impact on the way service providers and customers behave and interact.
The total perceived quality model (Figure 2-2) is presented as a basic model of the perception of total service quality. Good perceived quality is obtained when the experienced quality meets the expectations of the customer – the expected quality (Grönroos, 2007). The expected quality is a function of number of factors: marketing communication, word of mouth, company image, customer needs and values. Marketing communication includes advertising, direct mail, websites, Internet communications and etc. which are directly under the control of the company. The image (including customer’s prior experiences) and word of mouth factors are indirectly controlled by the company. The needs and the values that determine the choice of the customers also have an impact on the expectations (Grönroos, 2007).

However, the level of total perceived quality is not determined simply by the level of technical and functional quality dimensions, but rather by the gap between the expected and experienced quality (Grönroos, 2007). Thus, the total perceived quality determines the total image of the company, which is crucial to be managed in a proper manner.

2.2.3 The relationship between customer satisfaction and loyalty

There is a connection between service quality and customer satisfaction on one hand and customers’ willingness to continue the relationship and to recommend, on the other (Rust et. al, 1994). According to Hart & Johnson (1999), customers who claimed that they are ‘so-so satisfied’ or ‘satisfied’ are in the so-called zone of indifference (Figure 2-3). Only the ‘very satisfied’ customers show a willingness to continue the relationship and a high propensity for positive word of mouth. When the customers are very or extremely satisfied with the provided service, the retention curve rises steeply at the point of the satisfaction scale (Figure 2-3).

Furthermore, only “very” or “extremely satisfied” customers are engaged in any substantial positive word-of-mouth endorsement and thus become ‘unpaid’ marketing and sales persons for the company (Hart & Johnson, 1999). On the other hand, very unsatisfied cus-
customers can be expected to create substantial negative word of mouth, and thus become ‘terrorists’ reinforcing negative but not totally unsatisfactory experiences by other customers and scaring away potential new customers (Hart & Johnson, 1999). In this paper the relationship between the students’ satisfaction from the SL courses and their willingness to continue taking SL courses and to recommend SL courses will be investigated.

Figure 2-3 The satisfaction/repurchase function (Hart & Johnson, 1999)

2.2.4 Synchronous vs. asynchronous e-learning

In order to investigate to what extent SL provides value for education, synchronous and asynchronous e-learning are presented and further assessed. E-learning is a relatively new phenomenon and is defined as “delivering education to students who are not physically present” (Holmberg, 2005). Rather than being in lecture halls in person, students and teachers can communicate with each other using the Internet. Education online mainly comes in two forms:

a) Synchronous e-learning is when teachers and students communicate in real time by using webcams and microphones for instance. The communication is done live and thus it leaves some room for interaction in the form of students asking questions and getting answers to their questions shortly after.

b) Asynchronous e-learning on the other hand is when students can download or stream pre-recorded material (lectures or written documents for instance). Asynchronous e-learning has its limitations when it comes to interaction between teacher and student. However, it possess a great advantage in that it offers students more flexibility e.g. students can download lectures and watch them at any point they wish (Peters, 2001).

It is interesting to note that since synchronous e-learning is done in real time, it requires a relatively fast Internet connection, something that was not available ten years ago. For synchronous as well as asynchronous e-learning, the platform that is generally used is an intranet – where lectures and documents can be uploaded and made accessible for everyone within the intranet. However, due to technological development in recent years, new plat-
forms for online learning have been made available. One of these new platforms is the usage of virtual reality worlds (Shaffer, 2002).

### 2.2.5 Cognitive apprenticeship

Fundamentally, cognitive apprenticeship theory tries to foster a culture in which learners learn better if they share knowledge among themselves and interact with each other. Discussions in this learning process will facilitate individual cognitive growth so that learners will come to their own conclusions based on collaboration through interpersonal communication. From an instructional point of view, information is spread among the learners by means of observation and guided practice (Liu, 2008).

Cognitive apprenticeship theory is applied broadly in the area of distance learning in terms of media and learning interaction. Research has shown that the outcome of traditional education and distance education are the same, provided that one selects the appropriate teaching material and method, including student-to-student interaction and timely teacher-to-student feedback (Moore, 1990) and (Verduin & Clark, 1991). In general, the collaborative learning culture promoted by the cognitive apprenticeship theory can be applied into all the situations of the teaching and learning processes. Having said that, because of its unique application for the distance education field and the urgent needs of such theories in the field, the cognitive apprenticeship theory is very helpful in planning distance learning courses in particular (Liu, 2008). In this paper the cognitive apprenticeship theory will be applied on students’ and teachers’ communication satisfaction within SL.
3 Method

In this section a thorough reasoning of the research method chosen for this study will be provided. Moreover, the research devices used when conducting the empirical field-work will be elaborated upon.

Sound research is very much a function of its method of data collection. The classic debate of quantitative versus qualitative research is one that historically has tended to favour the quantitative side, due to claims of its credibility superiority. This has its roots in the old definition of science as “experiments conducted which results were measured and gathered” (Carr, 1994). Although qualitative research is today widely accepted, not every scientist fully respects its nature (Carr, 1994). The main critique towards qualitative research seems to be how it utilizes smaller sample sizes which pundits argue could lead to researchers actually missing their population or target audience (Saunders, Lewis & Thornhill, 2003). Conversely, quantitative research has been criticized for its lack of depth and high costs. Nevertheless, the general consensus amongst researchers today is that there is no overall best method for research; it all depends on the nature and requirements of the project in question (Carr, 1994).

3.1 Qualitative and quantitative methods

For this study, a mixed quantitative and qualitative approach was employed. For the qualitative side: in-depth interviews through Second Life with faculty members were used, with in total five different universities. For the quantitative side, a standardized questionnaire was sent out to the students at different universities within Second Life.

3.1.1 Qualitative interviews – Procedure and justification

The qualitative interviews were constructed in order to answer: why Second Life was implemented at the respective universities; how it was implemented; and the results of the implementation. More specifically, the objective was to investigate respective school’s expectations ahead of the SL launch and to compare it with the outcome after the launch, up to present time. Thus, the idea was to see if a match or any deviations between expectations and outcome could be found. The results for each university were then followed by comparisons between the different schools in order to identify any common denominators which not only helped us to get a better overview of Second Life’s appropriateness as an educational platform, but also set the basis for our recommendation to our home university, JIBS.

Second Life was used as the environment for the in-depth interviews with respective university. Apart from logistical reasons, the idea behind this choice of setting for the interviews was naturally to get a personal feeling for how smooth communication over this virtual world actually was. The exact procedure for how universities were approached and interviewed at Second Life is summarized below:

- A general background research on which universities that had implemented Second Life was conducted.

- The appropriate persons in charge at respective university were then contacted through e-mail. Meetings were arranged one at a time; with mutual consent that Second Life should be used as a host setting.
Through avatars in Second Life’s virtual world and its voice chat, the interviews were held and the interviewee’s answered prepared questions. That was generally followed by the interviewee giving a virtual tour of their educational setting and explaining how lectures were held.

The interviews were recorded and consolidated, before being subjected to analysis.

3.1.2 Interview techniques and in-depth questions

How an in-depth interview is conducted could have a major influence on the outcome of the study itself (Fink, 1995). In-depth interviews generally come in two shapes: either they are structured or unstructured. At the one extreme, there are completely structured interviews that have questions with preset answer alternatives for the interviewee to choose from. At the other end of the spectrum there are completely unstructured interviews without any concrete questions but rather a theme that the interviewee can circle around as she wishes (Fink, 1995).

For this study, a semi-structured interview technique was used for the interviews held at Second Life. Ten questions were prepared in advance (see Appendix 2) but not handed out beforehand to the interview subject. The questions were designed so that the following features were included:

- Expectations before launching SL
- Evaluation of how the project has been run until now
- Based on their experiences, advantages and disadvantages they see with SL as an educational platform
- Recommendations to other universities

In addition to the above, the interviewees were asked to give virtual tours of their educational complexes in SL, including buildings, lecture rooms, general meeting places and other relevant features. The idea was to assess how communication and teaching amongst students and teachers were actually held.

3.1.3 Participant observation

Apart from conducting qualitative in-depth interviews, qualitative observational studies were carried out at various spots in SL. Saunders et al. (2007) actually state that observations are a neglected aspect of research. Yet, they claim observations can be very rewarding and add considerably to the richness of a study. Saunders et al. identify two types of observational methods; participant observation and structured observation. For this study the principle of participant observation was utilized.

Participant observation is defined as qualitative and emphasizes the discovery of meanings people attach to their actions. It is mostly used as a supplement to other methods but could very well function as a main method of data collection for a study (Saunders et. al, 2007).

When conducting the in-depth interviews with the different universities, the subjects were asked whether it would be possible to attend some of their lectures inside SL as spectators. Two universities – Kalmar, and the University of Central Missouri - agreed to let their lectures being observed. The approach was one of the “observer as participant”-nature, which means that the students were aware of the purpose of our presence in their class. The ob-
vious limitation of this approach is as Saunders et. al. describes it “the loss of emotional involvement” in the sense that one cannot feel how it is like to be on the receiving end of the experience itself. However, due to accessibility reasons this was the only method of observation available.

3.1.4 Quantitative surveys – Procedure and justification

In order to reduce measurement errors for our qualitative interviews and avoid “missing out on our target audience” as Carr (1994) describes it, quantitative surveys with students complemented our field-work. The idea was to get the student’s perspective on how they perceived Second Life as a pedagogical platform and to assess the flaws and benefits with learning in this virtual world from their point of view. The exact procedure behind this process went like following:

1. Specific questionnaires for the students were designed as seen in Appendix 1.
2. The questionnaires were then uploaded online.
3. After each in-depth interview with respective schools the contact persons were asked to help us get the surveys answered by giving out the links to their students.
4. All answers were gathered and subjected to analysis.

3.1.5 Survey design

Fink (1995) states that a good survey contains six elements: measurable objectives, sound research design, sound choice of population or sample, reliable and valid instruments, appropriate analysis and accurate reporting of results. Furthermore, she identifies three different surveys: the ones that are subject to describing, the ones that compares, and the ones that predict (attitudes, opinions, values etc.).

Since students’ learning can be influenced by their satisfaction with the learning experience (Espeland and Indrehus, 2003), it is important to consider the students’ viewpoint on distance teaching and learning method. For this study, the survey was constructed to describe the experiences the students have had when it comes to taking courses inside SL.

The questionnaire consisted of two parts: self-reported online learning experience and open-ended questions. The self-reported online learning experience comprised eight items. For some of the items, students were asked to provide a response on a 4 to 5 point Likert scale (Likert, 1932) ranging from e.g. “Yes definitely” to ‘No, never”. For the other items, students were asked to choose from different predefined variables. The open-ended questions were constructed in order to give more information about the courses given in SL. A number of variables were predefined and were taken into account when the questions were designed. The chosen variables were taken from two different sources regarding the online learning subject: 1) A previous study conducted in Hong Kong about students’ views of the online learning examined through the relationship between the overall satisfaction of students and their online learning experience; 2) Learning variables in distance learning according to Belanger and Jordan (2000) and marketing aspect according to Kotler (2001).
Thus, the questionnaire examined 5 aspects of the SL learning experience as seen in Table 3-1 below:

<table>
<thead>
<tr>
<th>Aspect</th>
<th>Through Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing – What channel is the most effective to promote SL in order to reach students?</td>
<td>➢ How did you discover the Second Life course?</td>
</tr>
<tr>
<td>Reasons for using SL – what are the main reasons for using SL courses?</td>
<td>➢ Why did you choose to take a SL course?</td>
</tr>
<tr>
<td>Virtual environment influences – what is the impact of SL as a learning environment?</td>
<td>➢ Do you feel comfortable using a SL avatar to communicate online?</td>
</tr>
<tr>
<td></td>
<td>➢ Do you think Second Life helps or hinders the learning experience?</td>
</tr>
<tr>
<td>Overall satisfaction with online learning – what is the overall satisfaction and impression of using SL as an educational platform?</td>
<td>➢ How would you evaluate the course(s) you take or have taken within Second Life?</td>
</tr>
<tr>
<td></td>
<td>➢ Would you take a distance course within Second Life again?</td>
</tr>
<tr>
<td></td>
<td>➢ Do you feel comfortable using your Second Life avatar to communicate online?</td>
</tr>
<tr>
<td></td>
<td>➢ What courses would you like to see offered in Second Life?</td>
</tr>
<tr>
<td></td>
<td>➢ Do you think Second Life helps or hinders learning experience?</td>
</tr>
<tr>
<td></td>
<td>➢ Would you recommend a Second Life course to another student?</td>
</tr>
<tr>
<td>Improvements needed – What limitations have you experienced with SL when taking SL courses?</td>
<td>➢ From the experience you have, what do you think could be improved with SL in general?</td>
</tr>
</tbody>
</table>

Table 3-1 Summary of survey questions

3.1.6 Pilot Study

In order to make the survey as clear and concise as possible for the respondents a pilot study was conducted. The survey was handed out to two students within Second Life. The students where then questioned regarding the survey’s understandability, and asked to give feedback on questions as well as present own thoughts of improvements. Based on the feedback of the survey the design was then slightly changed. More specifically, questions 2 & 3 in the full survey (see Appendix 1) were slightly modified with the help of the feedback received.
3.1.7 Sample selection

Taking a sample of the complete population gives an estimation of the reality with the set back being a possible measurement error. According to Smith & Albaum (2007) there are three points of interest the researcher should focus on during sample selection:

1. **Where the sample is to be selected** - This is where the population is defined. Since the number of qualitative interviews conducted is limited, selecting the wrong person from the sample can be misleading (Holme & Solvang, 2002). The population for the qualitative interviews will here be defined as the teachers within Kamimo Island. This includes Molde University, Kalmar, University, and the University of Central Missouri. In addition, two other universities outside Kamimo were selected (Åbo Akademi, and Oakland University) in order to provide more reliability to the findings. The quantitative study was held among the students currently taking distance courses within Second Life at all five universities. A few students from other universities were included as well.

2. **The process of selection** - The universities within Kamimo Island will be used as a primary source for interview subjects since they have an established platform for education within SL as seen in (Figure 3-1). This gives the advantage of interviewing teachers that are currently dealing with and have dealt with many of the issues found in SL. By narrowing down the population it will give a better ground for selecting a sample of two benchmarking universities newly initiated in SL, which will be selected to compare the results with.

3. **Sample size**: Choosing a sample size is a trade-off between factors such as time pressure, cost constraint, and study objective. The sample for the quantitative study is aimed to include 50 respondents. By choosing a fixed sample of 50 respondents a balance between sample reliability and resources available for the course is achieved. This is directly related to the precision of the study. For the qualitative survey, a sample size of five universities was selected as the accessibility to teachers and instructors was limited in comparison with students.

![Figure 3-1](image-url)
3.1.8 Sample selection – Procedure and justification

Kamimo Island was selected for scrutiny due to the fact that it was the only island in Second Life that contained a Swedish university. Since the implications of this study will be highly relevant for JIBS, it was necessary to include the only Swedish university giving SL courses in the sample. Kalmar’s experiences and their students’ experiences will presumably matter the most for JIBS due to the fact that JIBS probably has more similarities with a fellow Swedish university, than with an American university. When it was decided that Kalmar would be included in the sample, it was simultaneously decided that the other two universities in Kamimo; Molde University and the University of Central Missouri, should be included as well in order to avoid any biased answers. Since these three universities shared the same island for teaching it would be interesting to see if they had the same interpretations or if there were any vast differences in their respective experiences.

Furthermore, in order to make the findings from the three universities in Kamimo more relative, it was decided that the results from Kamimo should be benchmarked with two other universities from two other islands. This represented a way of reducing measurement error and observer bias as well. Restricting the study to just one environment could seriously affect the results and neglect the fact that there are vast differences between the different educational islands in Second Life when it comes to the environmental settings.

The two universities outside Kamimo were randomly selected from a list of Second Life universities retrieved from the official Second Life researcher’s blog. The universities were already pre-categorized in alphabetical order in the list and were assigned chronological numbers (the first university was given the number 1, the second number 2 and so forth). Using the random number Table 3-2 below, two universities were chosen using the simple random sampling technique. Simple random sampling involves selecting cases (universities in this context) using a random number table as seen in Table 3.2 until the desired sample size is reached (two universities here), (Saunders et. al, 2007). The first random number from the random number table was chosen by using a very “traditional” random sampling method – closing the eyes and point at a number in the table. The number picked up from the table was then matched with the number from the list of universities and the university was then contacted. In order to keep it systematically correct the second university contacted was selected by picking up where it was left in the table and then matched with the university list. This procedure had to be repeated more than two times since the first universities contacted did not respond to e-mails, or responded but did not want to participate in an interview.

<table>
<thead>
<tr>
<th>78</th>
<th>41</th>
<th>11</th>
<th>62</th>
<th>72</th>
<th>18</th>
<th>66</th>
<th>69</th>
<th>58</th>
<th>71</th>
<th>90</th>
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<td>69</td>
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<td>72</td>
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<td>71</td>
<td>60</td>
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<td>53</td>
<td>86</td>
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<td>42</td>
<td>30</td>
<td>73</td>
<td>48</td>
<td>68</td>
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<td>16</td>
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<td>51</td>
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<td>37</td>
<td>99</td>
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<td>09</td>
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<td>05</td>
<td>41</td>
<td>66</td>
<td>54</td>
<td>01</td>
<td>49</td>
<td>97</td>
<td>34</td>
<td>38</td>
<td>85</td>
<td>01</td>
<td>23</td>
<td>34</td>
<td>62</td>
<td>60</td>
</tr>
</tbody>
</table>

Table 3-2 Extract from random number tables (Saunders et. Al 2007)
3.1.9 Non-response

Baruch (1999) identifies four common reasons for why non-response exists when collecting data. Respondents either refuses to respond, are ineligible to respond, the researcher cannot locate the respondent or the respondent can be located but unable to make contact.

Eight out of the thirteen universities contacted either did not respond at all or were not relevant for our study. Three of these eight universities in the non-response group had not commenced giving classes within SL, and were not relevant for our study due to this. Two of the universities within the non-response group’s only purpose of SL were to recreate their campus so that prospective students could see what the university looked like. The three remaining universities within the non-response group did not respond even though follow up requests where sent one week after the first e-mail.

As Baruch notes, the problem of non-response is not only that it could spawn biased results, any non-responses will require extra respondents to be found to reach the required sample size and this naturally increases the costs of collecting data. Due to the number of universities contacted not relevant for the study more time needed to be placed on contacting more universities.

3.1.10 Reliability

Easterby-Smith (2002) defines reliability as the extent to which data collection techniques or analysis procedures will yield consistent findings. Three research methodology questions can be asked and answered in order to assess the above:

1. Will the measures yield the same results on the other occasions?
2. Will other observers reach similar observations?
3. Is there transparency in how sense was made from the raw data?

When dealing with reliability in research there are some common traps that can potentially damage the empirical findings of a study. Robson (2002) identifies four threats to reliability. The first one is subject or participant error and takes into account for instance how a questionnaire completed at different times of the week can potentially generate different results. Secondly, Robson asserts that subject or participant bias can also harm the findings. Typically, subject or participant bias can occur in situations where interviewees in a company for instance may be saying what they thought their bosses wanted them to say. Thirdly and fourthly, reliability can be affected when there is a presence of observer error and observation bias.

In order to avoid falling into reliability-damaging pitfalls such as the above, the empirical objective has been to observe and scrutinize more than one educational island in Second Life. Furthermore, at some universities interviews have been conducted with more than one representative in order to minimize observation bias and subject error.

3.1.11 Validity

Robson (2002) defines validity as whether a researcher’s findings are what they appear to be or not. He identifies several threats to validity such history, testing, instrumentation, mortality and maturation. A part of this study is to provide JIBS a recommendation to whether or not they should enter Second Life for pedagogical reasons – in one way or another. Shortly after this study was commenced, the researchers were acknowledged of the
fact that there were ongoing discussions internally at JIBS where a potential Second Life entrance was discussed. Such a sudden turn of events is what Robson means with terms such as mortality and maturation and could shrink the validity of this study. Measures taken to combat this have been to go in with an open mind and investigating both pros and cons with SL as an educational tool. Furthermore, the researchers have merely been acknowledged that there have been discussions. What the discussions actually contained and what general attitude JIBS had towards Second Life during the course of this study was an unknown factor for the researchers of this paper.

3.1.12 Generalisability
With generalisability Robson (2002) means whether one’s research findings may be equally applicable to other research settings, such as other organizations. Generalisability is also sometimes referred to as external validity. This study is unique in the sense that its main focus will be on Second Life and universities as a whole. However, there will be a segment dedicated to the researcher’s home university JIBS, but it will mainly serve as a sub-paragraph. Thus the objective has always been to conduct a general study, with findings, which universities all over the world can benefit from. The procedure taken to strengthen the generalisibility of this study has been discussed mainly under the sample selection paragraph (see section 3.1.7).

3.1.13 Trustworthiness of data
An interview with Linden Lab was planned in order to get their point of view on some of the issues brought up by the interviewed instructors within SL. It could be argued that the data from the interview can be slightly biased because it comes directly from the creators of SL. The idea behind that interview was not to collect data that could be used to assess SL as an educational tool. Rather, the interview with Linden Lab was conducted in order to address some of the issues that had been brought up by the universities. Thus, it was the more visionary aspects of what direction Linden Lab wants to take SL into that were deemed as value-adding and that can be interesting to know for universities who are mulling over a possible SL entry.

One other issue that needs to be addressed is the fact that five of the students in the quantitative sample were not from any of the five universities that were assessed. Firstly, it is questionable whether this could skew the results in any way since they account for 10% of the entire sample. Secondly, what should matter the most is the fact that they have taken SL-courses and can reflect and assess upon this experience, since this criterion was a part of this study’s purpose. It can even be argued that having these five “external” students can give further validity to the quantitative data since more universities (apart from the five interviewed) would indirectly have been included.

3.2 Instruments for analysis
Descriptive statistics typically summarize data to make it easier to interpret, and present in a more manageable form. It is commonly used when dealing with large quantitative surveys to be able to interpret the result quickly (Trochim 2006). The interpretation of the results from the survey handed out to students taking courses within SL will be visualized by mainly pie charts and frequency tables in order to get a clear picture of the answers.

The qualitative findings will be analysed using an inductively-based analytical procedure. Bryman (1988) states that there are six inductively based analytical procedures available: data display and analysis, template analysis, analytic induction, grounded theory, discourse
analysis and narrative analysis. This study will focus on using data display and analysis. Miles & Huberman (1994) defines this procedure as summarizing, simplifying and organizing the data with the help of visual displays (such as spreadsheets or tables) in order to determine patterns and trends, whereby conclusions can be drawn upon. This method was chosen as it brings vast benefits when analysing large amounts of qualitative data. As Miles & Huberman (1994) notes, qualitative data collection tends to produce hours of audio-recorded interviews or extensive piles of notes. Using tables or other visual displays not only gives more structure, but also simplifies the process of recognizing relationships and patterns in the data.
4 Results

This section will present the empirical data gathered in a summarized form. The qualitative interviews will be followed by the quantitative data.

4.1 Empirical Findings- Qualitative interviews

The following section will show the results from the qualitative interviews. Interviews have been conducted with representatives from the three partner universities at Kamimo Island: Kalmar-, Molde-, and Missouri- University, as well as Oakland University, and Åbo Akademi. The respondents’ answers have been grouped in three categories: Education, Marketing, and Opportunities and Threats they see with SL. This is done in accordance with the research questions as seen in Figure 1-2. A summary of the qualitative interviews can be seen in Table 4-1.

<table>
<thead>
<tr>
<th>Interviewed Universities:</th>
<th>Representatives:</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of Central Missouri, USA</td>
<td>Bryan Carter, USA</td>
</tr>
<tr>
<td>Kalmar University, Sweden</td>
<td>Alistair Creelman</td>
</tr>
<tr>
<td></td>
<td>David Richardson</td>
</tr>
<tr>
<td>Molde University, Norway</td>
<td>Björn Jaeger</td>
</tr>
<tr>
<td></td>
<td>Judith Molkka-Danielsen</td>
</tr>
<tr>
<td>Oakland University, USA</td>
<td>Catheryn Cheal</td>
</tr>
<tr>
<td>Åbo Akademi, Finland</td>
<td>Isto Huvila</td>
</tr>
<tr>
<td>Others:</td>
<td>Representatives:</td>
</tr>
<tr>
<td>Linden Lab, USA</td>
<td>John Lester</td>
</tr>
</tbody>
</table>

Table 4-1 Qualitative Interviews

4.1.1 Kalmar University:

The interviews with Kalmar University were held in two sessions, with two different instructors. Both of the interviews took place at their Second Life teaching facilities at Kamimo Island. The environment was very much like a real life classroom with seats in the background and two large whiteboards, which could display PowerPoint slides. Using avatars and microphones, the interviews progressed and the questions were asked. In total, each interview lasted about 65 minutes.

Education

According to David Richardson and Alistair Creelman, the main reason for why Second Life was implemented at the University of Kalmar was to see whether using new technology in distance learning would improve communication between students and teachers as well as open up for possible collaborations with other universities worldwide. By using a virtual world in their educational program, students could actually learn how to design and build objects in a real virtual setting as well. Furthermore, David Richardson stated that SL
is one of the few environments that offer cognitive contact between students and teachers on a distance. The same cannot be said about traditional distance learning according to David, as they are often perceived as quite dull and boring by students which eventually lead to high drop-out rates. (D. Richardson, & A. Creelman, personal communication 2008-03-15).

Kalmar University is currently offering one course within SL, namely “Oral Presentation in English”, which gives three academic credits. Alistair Creelman, and David Richardson, two teachers at Kalmar University mention that so far the initial course has exceeded their expectations. The feedback from students has also been mostly positive thus far. Furthermore, the co-operation with the other two universities on the same island have worked out tremendously well and they are currently collaborating with the University of Central Missouri where students from the two universities can attend each other's courses and establish contact in between. David Richardson even mentioned that in one case two students from Kalmar and two students from Missouri became friends after a collaboration project and consequently the two American students decided to come to Sweden to study for their exchange semester and got to meet their two Swedish counterparts in real life as well (D. Richardson, & A. Creelman, personal communication 2008-03-15).

Marketing

According to David Richardson and Alistair Creelman it is in the best interest of any university to try new things if they perceive it to be beneficial for the university. Joining Second Life was as much of a strategic decision as it was a pedagogical one according to David Richardson. If Kalmar had waited to enter SL and only joined when it had become more “mainstream” it would have been much more costly for them. When asked whether they felt the implementation of Second Life had made distance learning more attractive for the students at Kalmar University they said these things are hard to measure and back up with facts. They perceived the brand of Kalmar University to be better known – both in Sweden and outside Sweden - due to SL. (D. Richardson, & A. Creelman, personal communication 2008-03-15).

Opportunities and threats

By investing time and knowledge into SL they simultaneously invest in new ways of learning according to Alistair Creelman. By doing this, the world becomes even more integrated as collaboration between people in geographical dispersed areas becomes possible. Students from all over the world have the opportunity to meet in SL and conduct group work together (D. Richardson, & A. Creelman, personal communication 2008-03-15).

After the initial test phase it was noticed that the students were more sceptical towards SL than the teachers. The students, most of them who were used to video and computer games, were not particularly impressed by the graphical interface of SL and felt the graphics were “slow” and “rough”. When asked what the main limitations they felt SL currently had they mentioned that most of the setbacks have so far been technological ones. Some students have too slow computers and the running of SL requires downloading of a client, which creates problem for the universities. Some concerns are also expressed that the students are exposed for too much external stimulus and thus makes it harder to remember the lecture afterwards. Prior to the implementation of SL, no in depth investigation or research had been conducted on how useful SL was as an educational tool by Kalmar University (D. Richardson, & A. Creelman, personal communication 2008-03-15).
Observational study Kalmar University

As part of the study, a lecture held by David Richardson from Kalmar University inside SL was observed on a separate occasion as seen in Figure 4-1. The lecture was more of a seminar and was held in the course “Oral Productions”. This course was held for students who aim to improve their conversational English. Five students were present at this day and the seminar was 120 minutes long with a five-minute break after the first hour.

Tutor David Richardson started by calling up the names of each student one by one in order to make sure their microphones were working properly. This was followed by the students holding formal five-minute presentations by making their avatars stand up, and moving them to the podium one at a time, so they would face the class. It was revealed during the seminar by David that the presentations were prepared as part of an assignment given to the students at the seminar before, and concerned unusual things or experiences they had in SL that they would like to share. While each presenter stood up on the podium their avatars were making hand gestures to accompany their vocal voices. After each presentation, the other students had the chance to ask questions to the presenter but this feature were not used to a greater extent.

After the presentations, there was some feedback given by David to each presenter and for the presentations as a whole. David expressed his satisfaction with the presentations and emphasized the development he had already seen compared with the first seminar when it comes to expanded vocabulary and better pronunciation. After a short break, the students were asked to meet David at the campfire just outside the lecture room. Around the campfire the students were sitting close to each other listening to David’s instructions for the second task of the day.

4.1.2 Molde University

The interviews with Molde University from Norway also took place at Kamimo Island and coincidentally, on the exact same spot as the interview with Kalmar University. Again, two representatives Björn Jaeger and Judith Molk-Molka-Danielsen from Molde were interviewed at two occasions. The two interviews lasted around 55 minutes each as seen in Figure 4-2.
Education

According to Judith Molka-Danielsen and Björn Jaeger, SL was implemented at Molde University mainly due to the lack of interaction between the teacher and students at traditional distance courses. The expectations of SL were that it would be a more social environment compared to normal distance courses. Molde University has had two courses in Second Life as well as one workshop. (J. Molka-Danielsen, & B. Jaeger, personal communication 2008-03-19).

- English Language Course
- History course “Bringing in the Jazz age”
- Workshops for business students

During the fall of 2008 the amount of courses are to be increased with a 3D design course. When asked what they perceived was the main advantages of using SL, Björn Jaeger answered that the students can take advantage of a socially constructible learning process and learn from the environment. Furthermore, SL could help students who perhaps do not have the courage or simply finds it inconvenient to talk or ask questions in public, according to Jaeger. Sitting behind an avatar makes it possible for shy students to speak up in a way they would normally not do in a classroom. As the students can meet lecturers from all over the world without the cost of travelling it becomes very cost effective in the sense that there is no need for a university to spend money on plane tickets, hotel arrangements etc. when for instance booking in a guest lecture by a highly ranked business man from a famous company. Instead the guest lecture can be held through SL with students from all over the world (J. Molka-Danielsen, & B. Jaeger, personal communication 2008-03-19).

Marketing

According to Judith Molka-Danielsen and Björn Jaeger the implementation of SL has made distance learning at Molde University more attractive. Furthermore, the brand of Molde University has been strengthened due to SL. The implementation has given Molde University attention from other universities, sections of the media as well as curious students. Björn and Judith argue that virtual worlds in education are here to stay and recommend other universities to use this as well.

Opportunities and Threats

When asked what kind opportunities SL have given Molde University Judith said the Kamimo Island offers an educational platform for all three universities and offer better prerequisites for collaboration between the universities. Furthermore, SL gives the opportunity of conducting advanced role-play scenarios within the classes, as well as with other universities and organizations (J. Molka-Danielsen, & B. Jaeger, personal communication 2008-03-19).

When asked about some of the expectations ahead of the launch, Björn said the teachers were anticipated to be the ones who were the most resistant towards implementing SL. However, this was proven to be wrong as many of them showed great enthusiasm and expressed their interest in joining the project almost immediately. The students on the other hand showed less enthusiasm as they lacked some of the skills and computer performance required in order to operate SL. Therefore, the instructors had to initially devote a lot of time to teach the students some of the most basic functions of SL. Molde University had prior to the implementation of SL not conducted any in depth investigation whether SL is suitable as an educational tool. When asked what kind of difficulties or problems they had
encountered so far there seemed to be some consensus that the concerns had so far mostly been of technological nature with slow bandwidth and computers that keeps crashing due to the SL client. Another concern was also related to technical insufficiencies, namely being unable to identify who is actually behind the avatars. There was also some concern expressed regarding the steep learning curve the students have to go through prior to controlling their actions within SL in the sense that there is a lot of information and instructions coming in at once, which can be perceived as overwhelming by the students (J. Molka-Danielsen, & B. Jaeger, personal communication 2008-03-19).

4.1.3 University of central Missouri

The interview with the University of Central Missouri was conducted outside Kamimo Island, in a specially designed area called Virtual Harlem. This area was designed with the purpose of re-constructing a virtual version of the 1920s and jazz-aged Harlem. Bryan Carter, who was the SL instructor interviewed, started the interview by giving a virtual tour of the area. The interview progressed close to a virtual park and lasted around 70 minutes.

Education

The main reason for why implementing SL at the University of Central Missouri was that one can do things within SL that would normally cost too much to conduct in the real world, according to Bryan Carter. Examples of this are to give the students the opportunity of being lectured by professors from any part of the world. When asked whether students had difficulties using SL in the beginning Bryan stated that by taking advantage of the fact that students in general are skilled in video games it becomes easier to adopt a virtual world such as SL since the transition from video games to SL would not be too large. According to Bryan Carter the students “absolutely love the communication possibilities SL offers”, and this makes the usage of SL a competitive tool, compared to more traditional means of teaching. The students’ expectations were met over and above which can be seen at the high attendance of the classes here (B. Carter, personal communication 2008-03-19).

The University of Central Missouri is currently offering courses within the following disciplines in SL (B. Carter, personal communication 2008-03-19):

- Literature course
- History course “Bringing Jazz Age to Life”
- Composition course

This is to be increased with in the near future with:

- Cyberculture
- African American Literature

Marketing

The implementation of SL has given the University of Central Missouri an increased collaboration with other universities such as the partners at Kamimo Island. Moreover, Carter stressed that a family or community between the students has been created. All of their avatars have the same last name as his – Mnemonic, in order to increase the relationship and belongingness to the group. It has given a good branding of the university as well as increased the awareness of the distance courses offered to the students. Due to this Carter recommends other universities to start using SL as well (B. Carter, personal communication 2008-03-19).
Opportunities and threats

Extensive research had been conducted prior to the implementation of SL, which is seen as one of the factors behind the success of SL at the university. In SL the classroom where the lectures are held are not required to be traditional classrooms. The University of Central Missouri’s island in SL Virtual Harlem is designed to be a community instead of a traditional classroom, much like a real city. Having a community where students can interact and learn, gives the advantage of using visual means, makes learning fun, and collaboration easier to handle between different schools (B. Carter, personal communication 2008-03-19).

Some concern has been expressed regarding the problem of recognizing which person is behind the avatar. At the current state SL has still some technological issues when it comes to functionality which can prevent students from enjoying it to its full potential (B. Carter, personal communication 2008-03-19).

Observational study University of Central Missouri

The second observational study was done in one of Bryan Carter’s classes at the virtual Harlem facilities of the University of Central Missouri. The class was part of a research methodology course. The students were gathered inside the main room, which did not seem to look like a lecture room as seen in Figure 4-3. It was much more designed for relaxation purposes with comfortable bedlike sofas that the students could lie down on while Bryan Carter, the tutor, was holding a lecture.

When the lecture commenced, around 20 students were present and while some of them lied down on the sofas, the majority had their avatars standing up while listening to the tutor who in turn stood in front of two large screens, facing the class. The screens were then used to put up PowerPoint slides and the first slide presented the agenda of the day. While the tutor was holding a monologue, some of the avatars went into an “away-mode” or “rest-mode” and their avatars almost gave the impression of falling asleep. However, this is rather common in general within SL when the avatar has been inactive for a period of time.

The lecture progressed with Bryan showing some slides on what to think about when citing references in essays and how to construct a bibliography. The atmosphere in the room was very relaxed and the extremely pedagogical voice of the tutor Bryan Carter further furnished the unwind ambience in the room. At any time the students could interrupt the teacher for questions and the teacher could see this when a student would hold in the voice key on the computer, which signalled on their avatar that they wanted to say something.

After the first few slides the students had the option of staying put in order to discuss matters on their own essays with Bryan, which they were working on as part of the course re-
quirements, or they could simply log out. A few students stayed and sketched Bryan’s advice on certain issues regarding their papers and while one student was talking to Bryan the others were waiting with their avatars in the background, keeping silent and just relaxing on the sofas or standing up.

4.1.4 Oakland University

At the University of Oakland, Catheryn Cheal was interviewed. The location was at Oakland University’s virtual campus and due to restrictions and limited access to unauthorized people; the only part of the area that was visible was the large auditorium in the middle of the location. Sitting at benches, the interview started but ran into some technical difficulties early on with microphones not working properly. However, after solving the problem the interview progressed without any major problems and lasted around half an hour.

Education

The main reason for implementing SL at Oakland University was to replace the somewhat outdated distance courses, according to Catheryn Cheal. Criticism had been expressed towards the traditional distance courses because they were perceived to offer a lack of communication between students and the teachers. Furthermore, SL was implemented since students could together with the teacher create the content of the course syllabuses through SL. When asked how the students reacted towards SL initially some did not like it because of the graphics but over time they have learned to appreciate the other things SL offers, such as increased interactivity and the fact that everything has become more visual (C. Cheal, personal communication 2008-03-21).

The University of Oakland University is currently conducting the following courses within the following disciplines (C. Cheal, personal communication 2008-03-21):

- Design
- Rhetoric
- Art history
- Business

Marketing

The distance courses at Oakland University have received attention mainly from other universities, according to Cheal. Furthermore, she mentioned that an additional reason for why SL was implemented at Oakland University was so that the school could market themselves through a new channel towards prospective students, as well as other stakeholders (C. Cheal, personal communication 2008-03-21).

Using SL gives the opportunity to conduct things that would normally be too costly in the real world, says Cheal. For instance, marketing students can try their marketing strategies with to a population that is demographically as well as geographically very dispersed. Another example is art students who are able to use their creativity and create their own virtual art galleries through SL and expose them to thousands of other visitors. Doing the same thing in real life would have cost a fortune (C. Cheal, personal communication 2008-03-21).

Opportunities and threats

When asked what kind of problems they have encountered so far, Cheal mentioned that the students need to learn a lot in the beginning when it comes to controlling avatars and
how SL works. This can create a negative attitude towards SL as some students tend to give up easily. She mentioned that there are some technical insufficiencies as well with computers that can not handle the technical interface. Oakland University has decided to restrict the access to only members of the university due to the potential threat of sabotage and disturbance from outside visitors. When asked if they in fact had been harassed or disturbed Cheal said that they have not but know universities that have encountered these problems and therefore they have decided to have this security precaution (C. Cheal, personal communication 2008-03-21).

4.1.5 Åbo Akademi

The interview with Isto Huvila at Åbo Akademi was held at “Edui Island II”, a place owned by a non profit organisation that rents out their island space to universities for education purposes. The environment as such did not include as much hills and buildings as for example the Kamimo Island, and was rather flat in its design. The interview held was approximately 40 minutes.

Education

The main reason for implementing SL was to investigate the potential for virtual worlds and to see what benefits it could indulge for the university. Distance courses previously held at the university were seen as having a lack in communication and perceived quite dull by the students. Before Åbo Akademi implemented SL on a larger scale, a pilot project was initially held to see what the students and teachers thought about the project (I. Huvila, personal communication 2008-05-08).

Feedback from both students and teachers were positive, leading to the next step with full-scale courses within SL. The students’ learning curve was although perceived as high and some technical difficulties could be seen. By offering the students some introduction lectures about how to use SL the steep learning curve was minimized.

At the moment no full-scale courses are held within SL by Åbo Akademi, although the following courses have been held previously:

- Interactive Media
- Database construction
- Information retrieval

According to Isto Huvila there are more suitable courses to start up with inside SL. Courses that interact with the environment as much as possible create the most benefits for the students, he argues.

Marketing

A web based forum for all universities in Finland interested in SL is about to be started. This would give the potential SL universities valuable information regarding for example suitable courses to have in SL. This networking can also be seen as a new marketing channel towards innovative teachers from the rest of the country (I. Huvila, personal communication 2008-05-08).

The implementation of SL has according to Huvila given Åbo Akademi much publicity since this is a rather new phenomenon in Finland as well. Huvila argues that it is important for universities in general to realise the potential for new communication channels such as Second Life. By starting in time, many resources can be saved in the future.
Opportunities and threats

The main advantage of using SL is that it brings students at geographically distant places together, and thus increases collaboration. By using the environment within SL, things can be simulated that normally would be too costly or dangerous in real life (I. Huvila, personal communication 2008-05-08).

SL might although not be the ultimate solution for distance learning. Concern is expressed to the fact that it is hard to know who the person you are talking to is, especially when working with students not from the same universities. As avatar expressions are not as accurate as in the real world it can be hard to see if students from especially other cultures/countries understand the teaching (I. Huvila, personal communication 2008-05-08).

4.1.6 Summary of parameters

<table>
<thead>
<tr>
<th>Kalmar University</th>
<th>Molde University</th>
<th>University of Central Missouri</th>
<th>Oakland University</th>
<th>Åbo Akademi</th>
</tr>
</thead>
<tbody>
<tr>
<td>Made investigation prior to implementing SL</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>SL fulfilled the expectations set up by university</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Planning to increase amount of courses</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Has implementation of SL made distance more attractive to students</td>
<td>Could not say</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Has implementation of SL increased the university’s brand awareness</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Would recommend other universities to implement SL?</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 4-2 Summary of parameters
4.1.7 Interview with John Lester – Linden Lab

After noticing that some of the instructors in SL were somewhat critical of some technological limitations with SL, it was decided that an interview with Linden Lab would be in place in order to address these concerns and find out what measures they are planning to take in order to combat these issues.

The interview was conducted with John Lester from Linden Lab. John Lester has been involved with SL since 2005 and currently works with providing resources in terms of advice for educational institutions within SL.

Universities within SL

According to Lester, the amount of universities established within SL depends on how you look upon it. Some universities are in SL solely because of marketing purposes and want to replicate their campuses into a virtual format and in that way try to attract prospective students to their university. Other universities use SL to conduct distance courses and bring together people and students from geographically dispersed areas. Then there is a third category of universities that have purchased an island but do not really use it for anything. A SL educators list was created in order to provide resources and a help for universities. Over a thousand universities have signed up, and on a regular basis receive newsletters from Linden Lab (J. Lester, personal communication 2008-04-15).

Universities that are unsatisfied with entering SL

According to Lester there are some universities who have purchased islands in SL but were unsatisfied due to a lack of visitors or lack of interest from their own students, and consequently decided to withdraw from SL altogether. Indeed, there had been some of these cases, although very few of them. The reason why this sometimes occurred was due to lack of knowledge from the universities’ side. Some universities purchase islands and do not create the proper artefacts around them and then ask themselves why no one comes to visit their island (J. Lester, personal communication 2008-04-15).

Limitations of SL

One of the problems concerning teachers being unable to identify their students or rather, their avatars. A special registration site exists which educators can use to register their students either by forming a group and send out selective invitations to students in order to join the group or using a common denominator such as the same last name in their avatars in order to mark their belongingness to a group (J. Lester, personal communication 2008-04-15).

Regarding the graphics and how Linden Lab are going to improve this issue, Lester mentioned that there will always be technological issues in the beginning when new mediums are used. A parallel can be drawn to the early days of the Web and how universities who tried to use the Web as part of their educational program initially complained that they had to download this software called “Netscape” (i.e. a web-browser) in order to be able to utilize the Web. This so called problem is obviously unheard of today. It can be stressed that education is an area that is very conservative and anything new will always be met with some scepticism. Furthermore, when it comes to the graphical limitations Lester argued that one’s experience in SL will not be restrained due to the graphics. Unlike in videogames with more advanced graphics, SL offers full freedom for the user and every object can be viewed from virtually any angle. The same thing cannot be said about videogames where the freedom is much more limited and everything is designed by professional artists, ac-
 According to Lester. In conclusion, over time when the users learn how to design more professionally the graphics will improve (J. Lester, personal communication 2008-04-15).

**Steps universities need to take in order to enter SL**

The easiest way for a university that have not been engaged in SL yet would be first to sign up to the SL educator’s list and then start connecting with other instructors from other universities in order to receive information and to establish a network. Instead of purchasing an own island directly, Lester suggested that it would be better to collaborate with other universities and use their space first before even thinking of purchasing an own island. The estimated cost for universities to enter SL through their own island would probably be a few thousand (US Dollars). Emphasis should be placed on that the real costs will not be in money but in people. The importance of having a dedicated staff that is really up for the challenge should be stressed, if the project is to be successful (J. Lester, personal communication 2008-04-15).

**4.2 Empirical findings – Quantitative survey**

The results from the quantitative survey are here briefly presented. For a more thorough and detailed version of the quantitative data the reader is advised to Appendix 2.

The target sample of 50 respondents was effectively met and the respondents came mainly from the five universities investigated. However, in order to reach up to the desired sample size, they were complemented with a few additional students in SL, not belonging to any of these five universities. The implications of this were previously discussed under section Trustworthiness of data 3.1.13.

When the students were asked to evaluate the courses they have taken in SL quality-wise, 47 % answered “very good” as seen in Figure 4-4. This was the most frequent answer and it is fair to say that more students were pleased with the quality than those that were not. Only 8 % were dissatisfied with the quality offered.

![Figure 4-4 Evaluation of SL courses](image)

On the question of why they decided to take a distance course within SL, the overwhelming majority, over 52 % said because it seemed “interesting”. The convenience factor also received quite a lot of response – 29 %, while easy access to lectures and time saving both were under the 16 % marginal. In the open ended box the most frequent answers were quite surprisingly that the students were not aware this was a SL course. Other frequent answers mentioned were “learning more about SL” and “testing new means of learning” (see Appendix 2).
When asked through which channel they found their SL course, as seen in Figure 4-5, almost 59% answered “recommended by a friend/student or teacher” while 25% said they had found out about their course through SL itself. Advertisements on the Internet or outside Internet apparently did not have much of an effect; around 16% ticked this alternative.

3. How did you discover the Second Life course?

Some of the things the respondents seemed less satisfied about in the SL courses they have taken were apparently the instructions given to them by teachers on mostly technical and functional issues concerning their avatars. 44% of the students felt this was something that could be improved in the future. There was also a demand for better or more communication and increased accessibility, which recorded 28% and 24%, respectively.

As seen in Figure 4-6 almost 70% of the respondents felt SL helps the learning experience in some way. 10% were of the opposite opinion and around 21% felt they need more experience in order to tell. Over 80% would recommend a SL course to a friend or other students.

When asked whether the respondents would take a SL course again, it was concluded that the course itself was the most deciding factor, as was identified by almost 60% of the respondents. The importance of the instructor was apparently also an important factor (20%) while the access to computers and the choice of SL environment did not have the same significance (10% and 12%, respectively).

A majority of the respondents felt comfortable using an avatar to communicate in SL and a third were inconclusive and stated that they need more experience in order to tell. When asked what kind of courses they would like to see in SL a wide variety of courses and disci-
Disciplines were mentioned – everything from design courses to simulated role play courses within business and language courses. One respondent had stated: “It doesn’t matter what course… same things as in real life. Everything is possible!”
5 Analysis and Interpretation

The analysis part starts with the synchronous and asynchronous e-learning as well as the cognitive apprenticeship theories, which are used in order to assess SL as an educational tool. They are followed by an implementation of the three functions of the Service marketing triangle and the total perceived quality model in order to evaluate the marketing perspectives of SL.

5.1 Synchronous versus asynchronous e-learning

Based on the observational studies and interviews conducted it can be said that SL as an e-learning tool can mainly be classified as a synchronous way of teaching. It does however contain elements of asynchronous characteristics. Students and instructors are connected through the SL client on the web and can communicate in real-time using either keyboard chat or voice chat. Teaching material such as lecture slides are often uploaded by the instructors through a virtual screen inside SL. Hence, there is no need to pre-distribute the material beforehand. However, during the interviews with the SL instructors it came out that some universities have been giving preparatory tutorials to their students in the form of guidelines that the students can download and read through. This material is supposed to make life easier for the students in terms of how to navigate in SL and how to control their avatars. Hence, this aspect, although not common at every university interviewed, can be seen as an asynchronous form of e-learning.

As noted previously, the biggest benefit of synchronous e-learning is the interaction possibilities it offers since it allows students to ask questions or interact directly with the teacher or with their classmates. Under asynchronous e-learning communication could be more difficult due of the lack of real-time interaction. However, as noted during the qualitative interviews: in order to make the most out of synchronous e-learning there is a need for fast internet connections and a high bandwidth. This was apparently not always the case at some of the universities investigated and this highlights the major limitation with synchronous e-learning. Apart from the connection speed, asynchronous holds another advantage over synchronous e-learning due to its flexibility, which allows students to freely watch lectures and notes anytime they wish. Yet, that did not seem to be a major issue judging from the empirical data extracted for this study. The students did not seem to mind the lack of flexibility since the real time interaction benefits they received instead compensated for this. Essentially, this can be interpreted as a trade-off: the more interactivity – the less room for flexibility.

Something that is important to mention regarding both synchronous and asynchronous e-learning is the so called “learning curve” that comes along. This was mentioned several times during the interviews and was often described as one of the “threats” with SL. What the learning curve basically describes in this context is when students are trying to learn something new the initial stages of input can be overwhelming and it was speculated during the interviews that this could make students lose interest in the course. From the student survey, this idea of a steep learning curve was reinforced as one of the things the students’ felt could be improved in SL was the instructions. However, having said all of this, it is important to note that with all new mediums and educational tools, an acclimatisation-period will always exist. The effect of the learning curve, or steepness if one will, can however be cushioned through preparatory means. This idea was supported by the fact that those universities in this study that had conducted some form of initial research or test trial of SL
did not express concerns to the same extent on the learning curve issue of their students, as opposed to those universities that had not utilized any preparatory measures.

5.2 Cognitive apprenticeship

One of the things this study investigates is how the usage of Second Life within academia could create new value for students and teachers. In Liu's phenomenological study on distance learning in 2008, she concluded that the more the study environment is perceived as interactive by students, the more they are pleased with the quality of the education as well. This rationale is further expanded with the cognitive apprenticeship theory, which states that when knowledge is shared through interaction and communication, the cognitive capacity will grow and be conserved. To put things in relative terms, students can easier remember what they have learned through a collaborative and interactive learning environment. As noted by the interviews with the SL instructors, what they perceived was one of the most value creating features with SL was the interactivity this virtual world offers. For instance, one of the reasons why SL was introduced at the University of Oakland was due to the fact that SL allows students and teachers to get together and create content through conjoint forces. More specifically, students can actually use script language to create objects and features within SL that can later be used in their classes. Some universities such as Molde University have gone even further and even created specific areas, called sandboxes, where students can let their creativity flow. As Catheryn Cheal at Oakland University noted, this content-creating feature was something that was hard to achieve through the traditional distance courses they previously offered. Likewise, high-drop out rates seemed to be evident at the distance courses of the University of Kalmar. It was suggested during our interviews with Kalmar that the implementation of SL was a product of the high-drop out rates in their conventional distance courses, which were perceived as quite "dull" by their students.

Interactivity seems to be one of the most well-associated characteristics of SL and this was mentioned in the NMC survey that was presented previously under the theoretical framework. Over 80% of the respondents of that survey deemed SL to be an interactive environment (see Table 2-1). It was also apparent during the observational studies conducted, that the classes were not a one-way monologue where the teacher is doing all the talking. In fact, there seemed to be some clear-cut interactions between students and teachers as the students were encouraged to interrupt at any time for questions or reflections, something that they did frequently. Additionally, the interactivity aspect in SL had a further dimension to it, as noticed during the observations. The instructor could instantly change the environment of the educational setting. At one stage the students were sitting in what looked like an auditorium where the teacher was giving instructions but suddenly asked the students to meet him over at “the campfire”. It may be said that dynamism and change of environment can rarely be found in traditional distance courses.

5.3 Implementation of Service marketing triangle and findings

The university is an organization that offers a pure service to its customers, the students. Thus, marketing communication happens between the university and students. Tools of this external marketing are mass communication, brochures, web sites and SL activities. The initiation comes from the university when giving promises to the students to provide education in order for the students to achieve higher knowledge. The promise to the students is given when the students receive information about the programs or services the university offers. This offer needs to be communicated down with the teachers in order to create services that fulfil the promise. Universities thus, motivate and empower teachers to deliver
or to enable the promise, which the external marketing function communicates to the customers. This internal communication between the university and the teachers is an important part of the **internal marketing**. It is vital to achieve productive and harmonious working relationships among teachers, administration and core staff as a basis for delivering good service to the students. However, teachers are the ones who deliver the promise to the students by conducting courses, meetings, seminars and all kinds of teacher-student interactions within SL. Thus, the mutual interactions are the most important segment for the **interactive marketing**. As mentioned before, the successful interactive marketing leads to long-term relations, networks of contacts and positive word-of-mouth (Grönroos, 2007). Below, each segment of the service marketing triangle (Figure 5-1) is analyzed through the empirical findings and results are given.

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**Interactive Marketing**

![Service marketing triangle](image)

**Figure 5-1 Service marketing triangle (Grönroos 2007)**

### 5.3.1 External marketing

As with most organizations, it is important for the universities to differentiate themselves on the market. Some universities emphasize their innovativeness, while others put a focus on internationalisation. Relationship marketing is a mutual process of creating value for both the students and the university. This value is created in interactions between the students and teachers. Emphasis should be placed to find out what courses the students desire most. A student that has the option to attend normal courses in a physical classroom might not perceive the option to have a lecture within a virtual world as attractive unless other factors are included. Factors that could enhance the attractiveness include the possibility to meet teachers/experts/organizations from remotely distanced areas during a lecture. A student that for some reason does not have the option to visit a university, might value the option of taking a class from a distance higher. By offering services, which the customers desire such as the option for students to take a course without the need to be physically present at a specific classroom, thus increases the value for the university. A clear example of the increased desire for distance learning can be seen in the United States, where 81 %
of all higher educational institutions offered at least one fully or blended online course by the year 2002 (Sloan survey of online learning, 2002).

Some universities use Second Life mainly for external marketing purposes. There may not be a lot of class exercises or lectures held at their virtual educational settings. Instead, what they have done is that the university campus has been replicated into a digital format with the purpose of marketing the university towards prospective students and other stakeholders. Examples of this were seen at the Oakland University campus, where all faculties were represented in SL although teachers to a greater extent do not frequently use the virtual campus yet. Another example is Princeton University who has decided not to have any academic credited courses inside SL but rather just demonstrate how their campus looks like. This external marketing towards prospective students was also highlighted in the interview with Linden Lab representative John Lester. Although currently not very common, he mentioned how universities in the near future could replicate their campus not only to a skin-deep level but go even further and perhaps even replicate how the dorms look like. Lester visualized this with the following quote:

“Imagine you are a student who is currently mulling over what university to apply for. What if you could through Second Life not only be able to see the campuses of the universities you are leaning towards but also see the dorms, your potential dorm room and even meet your potential room-mate or other students living in the same dorm and just chit-chat with them to get a feeling of how the campus life is at that university” (J. Lester, personal communication 2008-04-16).

5.3.2 Internal marketing

The core idea behind the internal marketing is that the personnel have to be satisfied and well motivated in order to fulfil the goals of the organization (Berry & Parasuraman, 1991). Thus, a positive atmosphere in the university creates satisfaction among the teachers and this internal satisfaction then leads to better interactions with students and a better service quality. According to Mintzberg (1979), universities are flat and decentralized organizations with a big operating core where teachers are insulated from formal interference, freeing them to use their expertise. It is up to the teachers to decide what courses to provide and how to organize the program schedule. In all the interviews, SL teachers said that the initiation behind the implementation of SL in their universities is their own or belongs to some of their colleagues. The interviewees received the information about SL from personal contacts, another teachers or instructors who already use SL for educational purposes, or read about it in the press releases.

For the teachers, it is usually an experiment in the beginning when starting a SL course, which gradually develops into a full SL course. It is their decision to start a new project like SL for educational purposes if they perceive it to be beneficial for the university. However, only one out of the five interviewed universities has conducted a preliminary research among students before implementing SL in order to investigate how it would be accepted.

“At first we were planning to make just a library research in SL. Later on, I and my colleague were thinking that it would be a good idea to continue working in SL and few months later we decided to offer Interactive Media, Database construction and Information retrieval courses.” (D. Richardson, personal communication 2008-05-06)

It is not the administration of the universities, which initiates SL projects, but it gives freedom to teachers to develop such a commencement. The educational institutions are usually very conservative and anything new is met with some scepticism (J. Lester, personal communication 2008-04-16). That is why it is of a great importance of having a dedicated staff
which to be really up for the challenge in order for the project to be successful. It is again a teachers’ initiative to develop further the project and therefore they need more resources and support. However, the cost for developing and implementing SL is “a few thousand US dollars” (J. Lester, personal communication 2008-04-16). In order to finance the project, teachers apply for a grant at governmental or non-governmental organizations such as Leonardo and Grundtvig programmes for example (D. Richardson, personal communication 2008-03-15). Motivation of the teachers is crucial for developing the SL projects. It is up to them to convince university in the cost efficiency and the effectiveness of SL and to develop further the initiative.

5.3.3 Interactive marketing

All of the five universities interviewed expressed criticism against traditional distance courses held through e.g. web conferences or streamed lectures. These courses have been perceived as quite dull and boring by students and therefore the drop out rate has been high. Reasons frequently mentioned were low or unsatisfactory interactions between students and teachers, a lack of communication and thus, low engagement to the learning process. Indeed, the interactions between teachers and students are crucial in the educational setting. That is one of the reasons for the implementation of SL mentioned by the interviewees – it gives the opportunity of providing distance courses with more interactions between both students and teachers. It is one of few environments, except face-to-face contact where the cognitive contact is possible (D. Richardson, personal communication 2008-03-15).

However, the service quality is whatever the customer perceives it to be (Grönroos, 2007). According to the student survey conducted for the study, 47 % of the students evaluated the SL course(s) they take or have taken, as ’very good’, 24 % defined as ‘good’ and 12 % responded that courses were ‘extremely good’. 8 % of the respondents classified the SL courses as ‘not good’ (see Appendix 2). The overall opinion is that students are very satisfied from the SL courses and thus, the quality can also be classified as very good. Yet, there are some concerns expressed worth elaborating upon. 44 % of the respondents stressed out the importance of the instructions given from the teachers before and during the SL courses. As Judith Molka-Danielsen from Molde University mentioned, the students showed less enthusiasm as they lacked some of the skills and computer performance required in order to operate within SL. Moreover, teachers interested in SL, were provided with sufficient basic and technical information about SL beforehand, while students on the other did not receive such support, according to Björn Jaeger at Molde University. It is clear enough that the lack of instructions is critical for the overall quality of SL courses, where all the interactions and processes are conducted real time in a virtual environment. Therefore, any preliminary introduction courses would help students to avoid any problems with technical issues and would make them aware of the SL environment.

Another 28 % of the respondents emphasized on the improvement in communications. It might be due to the technical issues again, such as the need of high Internet bandwidth or software adjustments in order for the voice chat to work properly. Still, it is an issue that has to be taken into account in order for the overall quality of the service to be improved. However, the initial reason for taking a SL course is because it is interesting (52 %), followed by the convenience of taking such a course (29 %). The reason why ‘interesting’ was chosen as a main determinant among the students might be due to the fact that SL courses are still a new phenomenon in e-learning. On one hand, they might be convenient for the experienced ones who already have taken SL course and know what to expect. On the other, they might be convenient for the ones who cannot attend normal, face-to-face
classes or just prefer taking SL distance courses. Furthermore, the willingness of the students to take a SL course mostly depends on the course (58 %), followed by the dependence on the teacher (20 %). Although students are strongly oriented to the outcome of the service, still the functional quality, how are the courses provided, is of a great importance for the total outcome (see Appendix 2).

Thus, the relationship between teachers and students in SL is crucial for creating value for both sides. The value is created in the interactions between the students and teachers. The good interactions lead to a satisfaction from the provided service. But as mentioned before, the quality of the service is whatever the students perceive it to be (Grönroos, 2007). 69 % from the respondents indicated that SL helps the learning experience and only 10 % pointed out that it hinders. Thus, it can be the overall students’ opinion about the quality of SL course can be described as very good. One should consider the potential technical problems that may appear in SL, as well as to provide students with preliminary instructions. It is supported by 21 %, which stated that they need more experience to answer (see Appendix 2).

Since the students are very satisfied with the provided SL courses, they want to continue taking SL courses as well as to continue the ongoing relationship. On the other hand, the ‘very satisfied’ students are ready to recommend the SL courses and thus, to spread a positive word of mouth (Rust et. al, 1994). The results from the survey support the theory about the students’ willingness to recommend SL courses if they are satisfied. 46 % from the respondents stressed out that they would definitely recommend a SL course to their friend or to another student. Another 36 % said that they would recommend a SL course (see Appendix 2). Thus, most of the students are potential unpaid salespeople who are ready to spread the positive word of mouth among their friends and colleagues both in SL and real life. According to Lovelock (2007), the positive word of mouth is a powerful tool of indirect marketing, much more effective than advertising and promotion.

Another interesting fact is how the students discovered SL courses. 59 % pointed out that a friend, student or teacher recommended SL courses to them. It means that it is mostly due to the positive word of mouth when it comes to advertisement of courses in SL. Another 25 % found out SL courses directly in Second Life. Such students are mainly experienced residents, who are familiar with the SL environment and the advantages it can offer. Only 16 % discovered information about SL courses through the traditional marketing – print advertisement, web sites, articles, PR publications or other (see Appendix 2).

SL has also made collaboration between universities easier, which Kamimo Island is an example of. At the island both students and teachers from different parts of the world gather and interact. Students from Kalmar University collaborate with students from the University of Central Missouri during English classes, and the teachers meet in advance to plan the lectures. Moreover, some of the teachers mentioned the fact that they have created a so-called family or community between the students. Bryan Carter at the University of Central Missouri stressed out that all his students’ avatars have the same last name as his – Mnemonic. Thus, he increased the relationship between students on one hand and himself with the students on the other, as well as created belongingness to a specific group. John Lester from Linden Lab mentioned the same fact that some SL instructors are using a common denominator such as the same last name in their avatars, as well as students’ avatars in order to mark belongingness to a group. It can be said that is another level of collaboration and communication in a virtual environment. It gives collaboration possibilities, and increases interactions between that kind of groups of students and teachers who are distinguishing themselves from the other SL residents.
5.4 Total perceived quality

In order for the university to attract students, the university’s image is of a great importance. The total image is to some part created with the assistance of the university’s employees: the teachers. The teachers are as mentioned earlier an important part in the interactions with students in SL, thus an important part of the mutual relationship which is crucial for creating value for both sides. However, before a SL course is conducted and interactions with teacher are established, students have initial expectations about the quality of the provided service. It is not just the outcome that determines whether quality of SL course is perceived as good, bad or neutral. In fact, good perceived quality is obtained when the experienced quality meets and or exceeds the expectations of the students, indeed the expected quality (Grönroos, 2007). If these expectations are not realistic, the total perceived quality would be low, even if the experienced quality were good.

The expectations of students about the quality of a SL course are a function of a number of factors: marketing communication, image, word of mouth and customer needs and values (see Figure 5-2). Universities use different marketing communications in order to promote SL courses such as advertising, websites, Internet communications, etc. According to the survey conducted for the study, those external marketing channels, which are directly under control of the universities, still do not play a significant role for publicity of SL courses. As mentioned before, only 16% of the respondents have discovered SL courses through traditional marketing – print advertisement, web sites, articles, PR publications or other. That shows the traditional marketing methods are inappropriate for promoting SL courses. It may be due to universities’ insufficient efforts or not well-directed marketing communication in order to present and promote SL courses.

![Figure 5-2 Expected Quality (Grönroos 2007)](image)

On the other hand, the word of mouth, the initial image of SL courses, as well as public relations, which are indirectly controlled by the universities are of a great importance for creating the expected quality. As previously stated, 59% of the respondents pointed out that SL courses were recommended to them by a friend, student or teacher. Yet, another 25% found information about SL courses directly in SL. Thus, the positive word of mouth plays the most significant part when forming the expectations of students. The expected quality strongly depends on how SL courses will be presented by both students and teachers.
However, since word of mouth is hard to control, it is up to the universities and teachers to present and perform a service which to be perceived as very good or extremely good by students (see Appendix 2).

Moreover, the needs of the students, as well as their values are important for determining the students’ choice and have an impact on their expectations. Students choose to take SL courses mostly because it is interesting (52% of the respondents from the survey for the study). It may be due to the fact that SL is still a new phenomenon full with many different possibilities. Another reason might be the fact that a person can easy interact with other person within SL through their avatars and thus, to create possible relationships. Indeed, some of the interviewed teachers mentioned that the role of the avatar in SL is crucial for establishing contacts and communication.

“SL can help students who perhaps do not have the courage or simply finds it inconvenient to talk or ask questions in public. Sitting behind an avatar makes it possible for shy students to speak up in a way they would normally not do in a classroom.” (Björn Jaeger, personal communication 2008-03-19)

Yet, 45% of the respondents pointed out that they feel more comfortable using their SL avatar to communicate online. Another 29% need more practice in order to feel more comfortable in SL. It may be due to the fact that most of the students have already gained experience how to manage with their avatars and thus, are more confident in their abilities within the learning process. Still, there are many students which need to spend more time elaborating on the practical side in order to be able to communicate and interact both with people and environment in SL (see Appendix 2).

![Figure 5-3 Experienced Quality (Grönroos 2007)]

It was stated that students are mostly focused on the course itself, which is the outcome of the university’s service. Indeed, it depends on the course whether or not to take another SL course again. Yet, how the course is provided is another important aspect. Like mentioned before, most of the students are very satisfied with the SL courses they had. It means that the overall opinion is that the courses were conducted very well by teachers, supported with 20% of the students saying that their willingness to continue taking SL courses depends on the instructor (illustrated in Figure 5-3). However, the environment also plays a major role in forming the overall experienced quality. In a virtual world like SL it is crucial
where the courses are conducted, what the educational islands look like, how the landscape is designed and even how are the students’ and teachers’ avatars customized. According to Björn Jaeger from Molde University, the students can take advantage of a socially constructible learning process and learn from the environment (personal communication 2008-03-19). Furthermore, Isto Huvila from Åbo Akademi stress out that courses that interact with the environment as much as possible create the most benefits for the students (personal communication 2008-05-08). Thus, it is crucial for the environment to be developed in a way that evokes interest and curiosity among students. Since it is much easier to change the environment in accordance with the needs of the students and teachers than traditional settings, it can be used as an advantage if designed and presented in a proper manner (Illustrated in Figure 5-3).

![Diagram](image)

**Figure 5-4 Total perceived quality (Grönroos 2007)**

Basically, students did not receive enough detailed information about SL courses beforehand. The main source was the word of mouth, while the traditional marketing channels were not used sufficiently. Thus, the expectations were based on how other students or teachers in SL have recommended the courses. Consequently, it can be said that students have had fluctuating expectations about the quality of SL courses. However, after conducting SL courses, most of the students perceived them as very good and were satisfied with the outcome. Hence, the total perceived quality of SL courses can be identified as very good, since the students’ expectations were met and turned to a positive experience afterwards. Thus, the students, which have conducted SL courses, have created a positive image about SL courses in general and are willing to take another in future (Illustrated in Figure 5-4).
6 Conclusion
SL as a 3-D virtual world and a new platform itself is interesting for observation, exploration, interactions with other residents and making new contacts. The creative possibilities of designing environment according to the one’s preferences, as well as the possibilities for communicating and interacting using self-customized avatars, make SL attractive and easy to use tool. Thus, it is not coincidence the fact that so many universities recognized the opportunity for using SL for both educational and marketing purposes. However, there are still some technical issues which have to be taken into account when using SL, like the slow graphics, fast internet connection requirement and demand for solid computer hardware.

What this study shows is that students need interaction in their distance learning environment in order to effectively grasp the learning content. Second Life offers this by giving a rich interactive environment where the students can communicate in real time. Thus students can extend their social network with new interaction possibilities and increase their cognitive capacity. The freedom that the students have, to create and develop the environment in collaboration with the university increases their willingness to learn.

6.1 Marketing implications

RQ: “How can universities use SL for marketing purposes?“

Universities can use SL as a marketing channel in order to reach out more students, develops network contacts between both universities and students, increases the attractiveness for the universities and thus, increase in popularity. SL offers a new external marketing channel for universities to reach out to prospective students. A university can create a virtual copy of its campus within SL. As a student it can be difficult to visit all universities one is considering to study at if they are located far away from each other. A virtual campus makes prospective students able to see what the university looks like at a very low cost before choosing where to study. If the campus is open for all visitors prospective students have the option to visit it any time.

If the virtual campus is designed well enough so that it gives an incentive for the university’s current students to do regular visits, it can become a meeting place where prospective students can meet current students. By talking to the current students it gives the prospective students a picture of how the university is to study at. If a university does not have the knowledge about how to create its own virtual campus it should be considered to outsource this. There are numerous examples within SL of poorly created campuses without any traffic, as John Lester from Linden Lab states. If an initial campus is poorly set up it can be hard to change at a later stage as the enthusiasm from both students and teachers decreases. Setting up a virtual campus combined with giving classes in SL signals that the university is innovative. Furthermore it can be implied that having a reputation of innovativeness increases the attractiveness for the university as an employer and thus attracts more teachers. Using SL as a tool in the external marketing will open up for new recipients, both students and teachers that are not as affected for conventional marketing channels such as brochures or catalogues.

As a university manage to create fully functional classes within SL a new service is created for the students. The results from the survey of the study have shown that the majority of students have perceived the courses held in SL to be “Very good” or “Good”. Based on this both students and teachers become external marketers spreading a good word of
mouth for the university. As seen in the result of the survey the most common way for the students to hear about a SL course is a recommendation from a friend or teacher, which stress the importance of the word of mouth. In order to attract more perspective students and to increase in popularity, universities may conduct courses on regular bases for everyone who wants to participate. Thus, on one hand, there is a possibility for the amount of visitors and prospective students to increase and on the other, the visitors may recommend the courses to another ones and the word of mouth to be spread.

As can be seen at the Kamimo Island the three partner universities have started collaboration they would not have to this extent without the implementation of Second Life. These relationships have increased the networking possibilities for the universities. This creates a situation which both parties gain from, as the end customer, the students receive a higher rate of access to information with more teachers accessible. Teachers can interact with teachers from other universities and share knowledge and experiences.

Much publicity has been gained by opening up a virtual campus. The interviewed universities all agreed upon that their virtual campuses had given them increased publicity both from researchers and media. Kalmar University was the first university opening up inside Second Life in Sweden, which makes it more interesting for the Swedish media. This publicity will decline as more and more universities introduce their own virtual campuses. However, this phenomenon is still rather new in Sweden and publicity to some extent can still be expected.

Some of our interviewed universities expressed concern about having their campus misused by unknown people and thus made restrictions against entry for non-members. This could especially be seen at the American universities such as Oakland University. A restriction limits traffic and hinders outsiders from entering the campus. This, in an attempt of removing a potential distorted image of what the campus facilities are used for. Worlds such as Kamimo Island have not used any restrictions and have so far not had any problems with outsiders. No restrictions give their world a better impact for their external marketing, as more people are reached.

6.2 Educational implications

*RQ: “To what extent can SL provide value for education?”*

Essentially, SL creates value in the pedagogical setting through three, main manners. Firstly, it *changes the dynamism of the study environment* for both students and teachers. Secondly, it *enables cost-effective applicability of theories* and alike for the students. Thirdly, it *creates premises for geographical functionality* for students, instructors, guest lecturers and such around the world. Moreover, as it was previously mentioned, it depends on the way particular course is presented and conducted, as well as on the creativity in the design of the virtual environment for each course.

**Changes the dynamics of the study environment:** Virtual worlds per se are dynamic already in the sense that they generally combine visual and audio display to create interactivity. SL uses these premises in synchronous time, and combines it with full freedom for the user that allows her to literally create content and add value. Teachers and instructors in SL can instantly change the environmental setting they are in, in order to create alignment with the nature of a specific task or exercise. This led to an apparent appreciated end-service perceived by the end-consumer as the overwhelming majority of the interviewed students were generally happy with the SL courses they had taken, would recommend a SL course to
a friend and believed SL benefitted their general learning experience. Thus, it can be concluded that the students indeed have a positive attitude towards SL as an educational tool and the teachers from those universities that were under scrutiny shared this view. Moreover, the empirical findings in this study help to reinforce the notion of SL as an interactive study environment, something that was supported by teachers, students and observations. Cognitive apprenticeship theory underpins the correlation between highly interactive study environments and increased cognitive capacity of students.

**Enabling cost-effective applicability of theoretical knowledge:** The teachers, which were subject to interviews continuously, highlighted the cost-effective features SL offers as a learning tool. One of the interviewees specifically pointed out how business courses can utilize this for their students taking marketing courses. Applying a marketing campaign or even just a billboard advertisement on the population of SL in order to get their responses is just one of the possible scenarios that were mentioned. The virtual applicability and the fact that SL contains a large number of users help students to bring their theoretical competencies into practice in a cost-effective manner. Other teachers interviewed emphasized that the universities as organizations could gain from it as well. One interviewee mentioned how SL had helped them to bring in a sales executive from a prominent company to hold a scenario-based sales seminar for their sales marketing students, at no monetary cost at all. Had the same university invited the same person in real life it would have undoubtedly been more expensive, considering they would have had to cover travel and accommodation expenses.

**Creating premises for geographical functionality:** SL can bring students together from geographically dispersed areas. Although the same can be said about traditional distance courses, SL creates better premises for cross-boarder interactions and collaborations. Some guest lectures in SL for instance are open to students from all over the world. One of the universities that were under scrutiny mentioned how their students had collaborated with an American university in a course in which the American students helped the Swedish students to improve their conversational English, and in return the Swedish students helped their American counterparts to learn more about SL. In the end, the two of the American students decided to come to Sweden to visit their two Swedish fellow students. Moreover, most of the educational islands inside SL are not access restricted which results in students easily visiting other universities and thus creates an international network of students that can interact and communicate conjointly.

Although SL contains several benefits as a learning tool, there are some limitations that should be mentioned. Firstly, SL can result in a steep learning curve for the students and if perceived as too overwhelming it can lead to a loss in interest by students. This was emphasized during the qualitative interviews. Therefore, for any university that wishes to start giving SL classes it is highly recommendable that some form of preparatory sessions exists for the students is existent. Secondly, some teachers felt that a virtual interactive study environment may not be something solely positive. It was mentioned that having other avatars passing by and the presence of other external objects could disrupt the concentration of the students. Having said that though, this view was not shared by all the teachers and one teacher countered this idea by stating that disruptions occurs in traditional distance courses as well, with students multi-tasking at the same time of live lectures. Thirdly there are some technological interfaces in SL that leaves room for improvement. It was speculated during the qualitative interviews that the somewhat rough and slow graphics could make students lose interest in the world. Furthermore, SL requires rather fast Internet connections and demands solid computer hardware, and this is not something that all universi-
ties can boast with. Despite all these limitations all the universities interviewed would recommend other universities to start giving SL-classes. The incentives that were frequently mentioned, aside from the pedagogical ones already discussed, were the strong belief that virtual worlds in education are here to stay and that a later entrance could be proven to be costly. Additionally, the fact that virtual worlds such as SL are still rather new mediums was highlighted and comparisons were made with the early days of the Web – reinstating that with time comes improvements.

RQ: “Which courses are more suitable to teach within SL?”

The amount and variety of courses that universities currently offer are not sufficient according to the student’s demand. The possibilities of designing SL environment according to the specific course offer opportunities for different creative solutions in order to attract students. For instance, marketing courses can be conducted real-time somewhere in a virtual space, where the products are “virtual buildings”, the market defined as niche islands and competitors are students from other universities taking the same course at the same time. Thus, the role playing within SL can be turn into important advantage when it comes to the interesting presented courses. However, most of the students from the survey conducted for the study, would like to have more design courses in SL. It may be due to the 3-D nature of the platform, so the students to be interested in developing the environment themselves and thus, creating more different objects or islands. Other students want to have for instance criminal justice course, teaching strategies, how to make group activities, leisure service in virtual worlds, business, management courses, or even juggling and poker courses. It may be concluded that students and teachers do not see limitations in offering courses in SL; all depends on the way particular course is presented and conducted, as well as on the creativity in the design of the virtual environment. Like one of the students from the survey answered: “It doesn’t matter what course... same things as in real life. Everything is possible!”

6.3 Managerial implications – JIBS

Based on the empirical findings of this study, it is recommendable that a university such as JIBS enters SL, for marketing as well as pedagogical incentives. Being a university that is well renowned for its pioneering and entrepreneurial spirit, SL can represent an opportunity for JIBS to further reinforce this public image. Moreover, SL opens up for in-depth collaborations and networking with domestic as well as international universities. As internationalisation is one of the key themes at JIBS, surely this can be seen as one of the major incentives behind a possible SL entrance. Although a thorough scrutiny of the overall quality and performance of JIBS’ current distance courses is beyond our awareness, there are other generalisable studies conducted on traditional distance learning (one which is mentioned in this thesis) that points out some fundamental flaws with this method such as the lack of interactivity between students and teachers. SL represents an opportunity to bring distance learning to life and make learning more fun. Having said that, due to some of the limitations the SL platform currently has, it is advisable to start of on a smaller scale and focus on implementing SL at just one course and preferably use hybrid classes initially; that is, have some of the sessions in SL and the rest in real life or through the traditional distance course platform.
Figure 6-1 illustrates a guideline is created and suggests the most recommendable path or framework for JIBS to take when/if entering SL:

### Figure 6-1 Recommendations for JIBS

**1. Investigate**
- Investigate if there are any instructors or teachers internally who are interested in working with SL. Form an internal “SL educators group”

**2. Join SLED list**
- Join the Second Life Educators List (SLED list). This list is a newsletter that is sent out on a regular basis to educators who are inside SL or who are interested in SL. This represents an excellent opportunity to come in contact with educators from other universities.

**3. Networking**
- Establish contact with other universities and teachers through SLED. See if they are looking for possible in-world collaborations. Universities with their own islands generally use their space for classes only a few times of the week. Often there are great possibilities to rent or even borrow parts of their island perhaps once or twice a week.

**4. Arrange Tutorials**
- Arrange some form of tutorials for teachers on how to teach in SL. Again, through the SLED list one can get a tremendous amount of help from other instructors as they all have been in the same situation at one stage.

**5. Start with pilot course**
- Use a current course (preferably one with a small amount of students) as a pilot course and hold some of the sessions or lectures inside SL. It is recommended that some preparatory sessions for the students are conducted ahead so that students are well-prepared. It is important to document the students’ experiences of SL at the end of the course.

It goes without saying that if the feedback is perceived as positive, the opportunities are endless. Purchasing an own island and outsourcing the build of a virtual version of the school are arguably the most natural steps to follow after this. Expanding the amount of courses and using SL to market the school to the stakeholders also falls in naturally. Several of JIBS’ already existing partner universities such as Nanyang Technological University in Singapore already have a presence in SL and JIBS could use SL to take the collaborations with their partner universities to a new level. Also new partner universities can be found with the help of SL. As noted previously in this thesis, libraries have also found their way into SL and JIBS can involve the library on campus in some way. The steps described previously do not necessary need to indulge high costs in terms of money. Joining the SLED-list is free and everything that follows that is mainly human resources and opportunity costs.

### 6.4 Criticism and further research suggestions

#### 6.4.1 Criticism of study

In order to avoid biased answers from the interviewed universities, more than one person was interviewed at Molde and Kalmar universities. Pioneering projects are often managed by people with much enthusiasm and can due to this be slightly biased. A weaker point of
this study is that due to time constraints and availability of respondents, secondary opinions from the other three universities were not gathered. This may have changed the overall opinion from some of the universities slightly. In order to minimize risks of biased answers both from students and teachers due to varying quality of island design, and teacher knowledge/teaching method etc., five different universities from four different countries were examined.

As not many universities are conducting classes within SL today much effort was put in order to find students that have participated in courses within SL. From the registered SL users, only some are frequently active. A small amount of the active users are students. Our sample of 50 students gives due to this an accurate measurement of the students’ beliefs. It is important to know that the quantitative survey was handed out inside SL, which gives the possibility that students that are uncomfortable with SL and thus drop out an early stage of the classes are not given the option of answering the survey and can to some extent give a biased answer of the survey. If the students want to receive the grades for a course they need to finish it, and thus create a strong incentive for them to continue with their SL course even though they do not prefer this tool. As students were asked to fill in the survey during class time their opinions should due to this be found in the survey result as well.

6.4.2 Suggestions for further research

Interesting parts that can be subject for further research are direct comparisons of courses held only within SL, and distance courses held with more traditional means. The results should then be compared to see which students have gained the most knowledge at the duration of the course.

As universities often are in close collaboration with different organisations, it would be interesting if a joint entry in SL could be formed, between the university and some of its host companies so that for example host companies and the university both could benefit from the external marketing.

One aspect that this study does not scrutinize is the copyright and legal issue of universities who enter Second Life. Since all the information that is spread in classes and lectures in SL goes through Linden Lab’s servers in the United States, one may ask whether there are any risks of information leakage to external parties or even information being sold by Linden Lab. However, we consider this to be a less of a priority for universities because by the same token there will always be a risk with any type of information that is sent over the Internet and even schools which use Intranets should in that case be worried since they can get hacked or students can give out their passwords to external parties. This is the reason why contracts are used so that accountability can be taken into context in such a scenario and this is also the case with Linden Lab and the universities inside SL.

Since this study only focuses on Second Life, it could be interesting to see whether some of the other virtual worlds that were briefly mentioned here are used by universities and perhaps a direct comparison could be made where the quality of education between the worlds can be compared and assessed. The reason why this study only focused on Second Life, something that was already stressed early on, was because of its number of users. What we do know is that Second Life is by far the most widespread virtual world and contains the most universities. Therefore, the accessibility and resources available for us to come in contact with universities was simply far greater with SL than it would have been with other virtual worlds.
List of References


Appendix 1

Quantitative study

This questionnaire is part of a university research project. It is about investigating Second Life’s appropriateness as a pedagogical tool. Please help us find out more about the opportunities offered by distance education and Second Life in particular and fill out this short questionnaire. If you have any questions, please contact us at bbam05anax@ihh.hj.se.

Circle the statement(s) that applies to you.

1. How would you evaluate the course(s) you take or have taken within Second Life?

2. Why did you choose to take a Second Life course?
   a. Easy access to lectures   b. Time saving   c. Convenience   d. Interesting   e. Other (please specify)

3. How did you discover the Second Life course?
   a. Recommended by a friend /student /teacher   b. Advertisement - print /internet /other   c. In Second Life   d. Other (please specify)

4. From the experience you have, what do you think can be improved in Second Life courses in general?
   a. Access   b. Instructions   c. Communication   d. There is no need for improvement   e. Other (please specify)

5. Would you take a distance course within Second Life again?
   a. Depends on access to computers   b. Depends on the course   c. Depends on the instructor   d. Depends on environment in Second Life   e. No (please specify why)

6. What courses would you like to see offered in Second Life? Please specify.

7. Do you feel comfortable using your Second Life avatar to communicate online?
   a. Yes, I feel more comfortable   b. I need more practise   c. It doesn’t not matter   d. I feel uncomfortable   e. Other (specify)

8. Do you think Second Life helps or hinders learning experience?
   a. It helps   b. It hinders   c. I need more experience to answer   d. Other (specify)

9. Would you recommend a Second Life course to your friend or to another student?
   a. Yes, definitely   b. Yes   c. No   d. No, never

10. Which Second Life course are you taking at the moment or have you taken in the past?

Thank you for your time and cooperation!
Appendix 2
Results from Quantitative Survey

1. How would you evaluate the course(s) you take or have taken within Second Life?

- Not good: 12
- Satisfactory: 8
- Good: 9
- Very good: 24
- Extremely good: 47

2. Why did you choose to take a Second Life course?

- Easy access to lectures: 52
- Time saving: 11
- Convenience: 8
- Interesting: 29

Other:
1. Only place the subject was offered
2. I like to learn
3. Curiosity
4. I want to teach in SL
5. Interesting
6. Want to learn about SL
7. A new thing
8. Want to test new ways of learning
9. Interesting with new way of learning
10. Thought SL was interesting
11. To study SL as a learning tool
12. Didn’t know it was a second life course
13. Didn’t choose
14. Didn’t realize it was a SL course
15. Did not know what I was getting into, but I’m glad I took it
3. How did you discover the Second Life course?

- From a friend/student/Teacher: 59
- Advertisement-print/internet/other: 16
- In Second Life: 25

Other:
1. Listserv (DEOS- distance education)
2. By eon
3. Course catalogue
4. Was part of developing process
5. Recommended by teacher
6. Didn’t know about it
7. Was not aware it was in SL
8. Didn’t know it was in SL
9. Unaware of class held in SL
10. Didn’t know it was in SL

4. From the experience you have, what do you think can be improved in SL in general?

- Access: 44
- Instructions: 28
- Communication: 24
- No need for improvement: 4

Other:
1. Don’t know
2. A better way of determining the level of the course
3. Quality of build environments, access to inform resources
4. More engagement, implement 7 strategies of engagement
5. Improved graphics and easier to use for students
6. Almost every aspect could be improved at this point
7. It is already amazingly good – this browser addition is great
8. Information about how to act in communicating in SL because it took some time to figure out
9. Hard to say at the moment, no references yet
10. Not sure yet
11. Interface training
5. Would you take a distance course within Second Life again?

<table>
<thead>
<tr>
<th>No. Specify:</th>
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</thead>
<tbody>
<tr>
<td>1. It’s more about pedagogy/approach</td>
</tr>
<tr>
<td>2. I’d rather just be in class</td>
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</tbody>
</table>

6. What courses would you like to see offered in SL?

<table>
<thead>
<tr>
<th>Specify:</th>
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</thead>
<tbody>
<tr>
<td>1. Business course</td>
</tr>
<tr>
<td>2. Visualisation</td>
</tr>
<tr>
<td>3. Management</td>
</tr>
<tr>
<td>4. Accredited courses</td>
</tr>
<tr>
<td>5. All courses</td>
</tr>
<tr>
<td>6. Role plays for businesses</td>
</tr>
<tr>
<td>7. Building and design courses</td>
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<tr>
<td>8. 3d Design</td>
</tr>
<tr>
<td>9. Any course</td>
</tr>
<tr>
<td>10. Didn’t know it was in SL</td>
</tr>
<tr>
<td>11. Language Course</td>
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<tr>
<td>12. Design, architecture, intercrop</td>
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<tr>
<td>13. Technology course</td>
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<tr>
<td>14. Language course</td>
</tr>
<tr>
<td>15. Criminal justice</td>
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</tbody>
</table>
7. Do you feel comfortable using Second Life avatar to communicate online?
- Yes, I feel more comfortable
- I need more practice
- It does not matter
- I feel uncomfortable

Other:
1. Comfortable, much better than expected
2. I wish I was more trained in controlling my avatar, I feel limited

8. Do you think Second Life helps or hinders learning experience?
- It helps
- It hinders
- I need more experience to answer

Other:
1. Danger of being distracted
2. Need to experience more than just a lecture
3. It’s better than just audio learning
4. Depends on course, teacher
5. Depending on course, teacher and students

9. Would you recommend a Second Life course to your friend or other student?
- Yes, definitely
- Yes
- No
- No, never

Other:
10. Which course are you taking at the moment or have taken in the past?

<table>
<thead>
<tr>
<th>Specify</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Geology</td>
<td>19. Fashion course</td>
</tr>
<tr>
<td>2. Scripting</td>
<td>20. Design course</td>
</tr>
<tr>
<td>3. Programming and scripting</td>
<td>21. Meditation, building</td>
</tr>
<tr>
<td>4. Building, coding</td>
<td>22. Business classes</td>
</tr>
<tr>
<td>5. Scripting and modelling</td>
<td>23. 3D design</td>
</tr>
<tr>
<td>6. Virtual librarianship</td>
<td>24. Teaching, cyber cultures</td>
</tr>
<tr>
<td>7. Working in sl</td>
<td>25. Building</td>
</tr>
<tr>
<td>8. Teaching</td>
<td>26. Teaching in sl, virtual librarianship</td>
</tr>
<tr>
<td>9. Designing</td>
<td>27. TUI, instructors career program</td>
</tr>
<tr>
<td>11. Cyberone</td>
<td>29. Language</td>
</tr>
<tr>
<td>12. Research and creative studies</td>
<td>30. Oral production</td>
</tr>
<tr>
<td>14. Oral production</td>
<td>32. English course</td>
</tr>
<tr>
<td>15. Design</td>
<td>33. Composition</td>
</tr>
<tr>
<td>16. English</td>
<td>Composition</td>
</tr>
<tr>
<td>17. English</td>
<td>English, composition</td>
</tr>
<tr>
<td>18. English</td>
<td></td>
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</tbody>
</table>
Appendix 3

Qualitative study

1. What were the main reasons for implementing SL at your university?

2. How did you investigate whether or not to include SL at your university?

3. What expectations did you have before you commenced this project?
   - on a personal level
   - you perceive the students had

4. How well did SL meet these expectations from your point of view?

5. What courses are you offering right now?
   - Why did you choose to offer these courses?
   - Do you think these are the most suitable courses?
   - Are you planning to increase amount of courses?

6. What do you think are the main advantages of using SL as an educational tool?

7. What would you say are the main disadvantages of using Second Life as an educational tool?

8. Would you recommend other universities to start giving courses within SL – Why/Why not?

9. What does the future hold for your university’s SL project?

10. Would you say the implementation of SL has made the distance learning at your university more attractive? Why/Why not?
    - Would you say it has strengthened your university’s brand?