Chapter 9  
Conclusions

“People do not like to think. If one thinks, one must reach conclusions. Conclusions are not always pleasant.”  
~ Helen Keller ~

In this final Chapter, I initially summarise this research project in Section 9.1. I then explicitly answer the research questions which form the basis for this project in Section 9.2 and present conclusions drawn from these research findings in Section 9.3. Next, I summarise the main contributions of the project in Section 9.4 and finally put forward my suggestions for future research in Section 9.5.

9.1 Summary of the Research Project and Thesis

In this thesis, I have analysed the nature of EC/EB programs in the AP region during the period 1997 to 2003, from both a pedagogic and marketing perspective. The main focus of the research project which forms the basis for the thesis is to:

- provide a historical introduction to EC and briefly describe tertiary EC/EB education (Chapters 1 and 2);

- seek a more appropriate, sophisticated and scientific approach for offering new EC/EB programs, than the simple adaptation of a traditional pedagogical approach, such as one of the existing curriculum development models (Chapter 2).

- explain and define a model of the components of EB, originally undertaken at a very early stage of this research project, as a foundation for EC/EB programs (Chapter 4); and thereafter identify the different types of EC/EB programs suitable for meeting the possible range of market demands and the distinction between EC/EB and other academic programs (Chapter 6);

- develop a model (NESPO) based on the literature relating to new service product offerings for the effective offering of new educational service products (Chapter 5);
• reinforce the understanding of the nature of EC/EB degree programs provided in the earlier, more theoretical chapters, by studying the responses to three surveys and one follow-up survey of EC/EB degree program leaders (Chapter 6);

• present an overview picture of EC/EB programs in the AP region from 1999 to 2003 (Chapter 6);

• analyse the marketing nature of EC/EB programs in the AP region, quoting representative samples of career opportunities and advertisement/promotion activities being undertaken by the universities engaged in offering such programs (Chapter 7); and

• investigate whether (and how) universities in four countries of the AP region have made use of new service product concepts (NESPO) in creating their EC/EB programs (Chapter 8).

This research project started at the end of 1998, when EC/EB academic programs had not yet become popular in the AP region. Throughout this research project I have focused on the nature of the EC/EB programs, rather than on the curriculum aspects of these programs in the region under study. The sudden emergence of EC/EB programs circa 2000 prompted me to modify my original aim of identifying an optimal EC/EB curriculum into an exploration of the implications of using new service product concepts as an appropriate mechanism for offering new EC/EB academic programs. The major deliverable of this thesis, therefore, apart from the significant body of empirical data gathered on activities in this field in the AP region between 2000 and 2003, was the development of an effective model, adapted from the literature on new service product development, for the offering of new educational programs in fast-moving fields of interest such as EC/EB.

In the next section, I provide explicit answers to the research questions which formed the basis for this project.

9.2 The Findings

In order to discuss the findings of this Thesis effectively, I begin by reiterating the research questions upon which the research project was founded. The questions have, of course, already been introduced (in Section 3.3.1), but this explicit re-stating of
the questions forms a preliminary to my discussion of the answers to those questions and the implications which flow from them.

The principal research question was:

Are universities flexible enough to develop their EC/EB programs effectively through:

a) explicit recognition of their market-oriented nature; and

b) engagement with the concept of new service product development?

As with all research questions, which are designed to answer a fairly complex problem and are therefore unavoidably expressed at a fairly high level, I found it necessary to further sub-divide this question into a number of subsidiary research questions (in this case, six), which fall logically into two groups:

The first four subsidiary questions were designed to provide an answer to Part “a” of the principal research question:

SRQ1. What are the relative roles of pedagogy and market orientation in constructing EC/EB tertiary educational programs?

SRQ2. What are the features of the development of educational service products — the degree programs?

SRQ3. What is the nature of EC/EB degree programs?

SRQ4. Are EC/EB programs service products?

The final two subsidiary questions were designed to provide an answer to Part “b” of the principal research question:

SRQ5. How have universities made use of new service product concepts in creating EC/EB programs?

SRQ6. How could new service product development be better used in creating programs?

In the next section, I provide an explicit answer to the principal research question by answering each of the subsidiary research questions. The sum of the answers to the subsidiary questions furnishes the answer to the over-arching question.

9.2.1 The pedagogic nature and market orientation of EC/EB programs – answers to Part “a” of the principal research question

SRQ1. What are the relative roles of pedagogy and market orientation in constructing EC/EB tertiary educational programs?
From a pedagogic point of view, the structures (curricula) of EC/EB programs are no different in their essentials from those of any other programs offered by the universities in question – students are required to successfully complete a number of courses, linked in some logical or pedagogically-related fashion, in order to obtain the degree (qualification). The topic areas covered by EC/EB degrees, however, tend to be more multi-disciplinary than other degree programs, ranging from (refer to Section 6.1.2.2):

- technical material taken from the IT field;
- systems concepts taken from the IS area;
- strategic business issues and concepts taken from the Marketing and Management domains;
- legal principles and concepts taken from the legal discipline; and
- specialist and dedicated modules from a variety of other disciplines including (*inter alia*): Computer Science, Marketing, Management, Accounting, Logistics and Finance.

EC/EB programs also contain unique aspects which differentiate them from other, apparently similar Information Systems or Management degrees:

- the technical IT component of EC/EB degrees is more focused on network architecture (particularly Internet-based networks) than is the case with other IT programs;
- the systems concepts in the IS part of the programs are focused on how to develop EC application systems in an Internet environment and include a focus on such applications as using html, asp and java for web page construction;
- new e-business models related to B2B, B2C and B2G relationships are distinct from traditional business models in the Marketing and Management domains, as are the strategic issues and concepts on which EC/EB degree programs focus; and
- the legal issues studied tend to specialise on such things as electronic agreements, digital signatures, privacy/security issues, and consumer and intellectual property rights.

All these are highly specialised areas within the relevant disciplines, to align with their EC-related nature. As the scope to be covered by any EC/EB program is very
wide, it is difficult to maintain a balanced weighting in the contents of the degree programs, which therefore tends to depend on the focus of the ‘offering’ teaching unit(s) (faculty) involved in the program development. If the offering teaching unit is Computer Science or IS, the content of the programs tends to be skewed towards Computer Science or IS, and similarly with business concepts if the programs are offered by a Business Faculty.

In order to solve this ‘large score’ problem, some universities have further subdivided their EC/EB programs into business/executive and technical streams. This phenomenon is most apparent in Hong Kong, and can be clearly seen at the Chinese University of Hong Kong, City University of Hong Kong and the Hong Kong Polytechnic University (refer to Section 6.1.2), although I also found examples in other parts of the AP region (in Australia, for example, Deakin University has specialisations at the bachelors degree level in EC Implementation and EC Management).

Some EC/EB programs leaders would prefer EC/EB programs to be offered at the masters, rather than at the undergraduate level. They considered that EC was multi-disciplinary in nature and felt it would be very difficult for undergraduate students to digest and practise the complex business concepts involved without having pre-existing work experience. Nonetheless, most of the universities surveyed and interviewed offer a mix of under-graduate and graduate subjects and programs in EC/EB.

Although large numbers of EC/EB programs emerged circa 2000, indicating how market-oriented these degrees were, each university normally offered only one EC/EB program. Some universities do offer several EC/EB programs hosted by different departments/schools within their own universities; examples include Bond University, University of Wollongong, Open University of Hong Kong, Chinese University of Hong Kong, City University of Hong Kong and Polytechnic University of Hong Kong (refer to Section 6.1.3). It appears that these universities are producing similar products to compete with one another, giving up the advantages offered by synergy and possibly even risking cannibalisation of market-share.

I noticed, however, that such apparent “internal competition” for customers was in fact complementary, due to the high levels of demand from customers and faculty specialisation. It is quite possible to offer two complementary EC/EB degree programs in different faculties, where one is focused on, say, business and another on
technical issues – and this appears to have been the case in those universities within my sample which were offering more than one EC/EB program. From the university’s point of view, as long as the schools/departments can meet the market demand without financial subsidy, an offering of similar degree programs by different faculties is feasible, especially when they are targeting a very specific customer base with varying academic backgrounds and from different market segments.

As I mentioned earlier in this Section, a number of respondents suggested that it might be more appropriate for EC/EB programs to be offered only at the masters level. A further attraction of this approach, from the university’s point of view, is that masters degrees in the AP region are almost all self-financed. In other words, students have to pay (sometimes quite high) fees to enrol in masters programs right across this region. While a systemic approach to marketing was not taken by all (nor even by most) of the universities surveyed, one market-oriented approach which was readily adopted was the provision of multiple-exit points from EC/EB masters programs, as a solution to solve the temporal, capability and financial problems of many of their students.

With this option, students may successfully complete 4 subjects to obtain a Graduate Certificate and 8 for a Graduate Diploma, instead of being forced into mandatory completion of all 12-16 subjects to earn a masters degree. This multi-exit scheme has worked well to provide more product flexibility for students.

The relative roles of pedagogy and market orientation in constructing EC/EB programs can be further investigated. In ‘traditional’ educational program development, the majority of program developers are very focused on the program curricula: the balance (or weighting) of the content. When developing new EC/EB programs, I discovered that the majority of the program developers continued to follow this standard pattern, adhering to the set of guidelines laid down by their own universities. In some cases, top management at a university might offer help in speeding up the approval process of the new programs through the various committees (such as faculty and university Education Committees, and Faculty and Academic Board) and in mediating political issues, as many parties from different departments struggled to resolve “demarcation disputes”.

In addition to the comparatively obvious new program development guidelines set by individual universities which apply to all new academic degree programs, I identified
and have examined three program development approaches for constructing the EC/EB programs in this research project: (i) *Internal Conception, External Development and Delivery*; (ii) *Internal Conception, Development and Delivery* and (iii) *Internal Conception, Phased External Development and Internal Delivery* (see Section 8.2.2).

EC/EB academic programs have their own special characteristics, i.e.

- New programs emerged suddenly and were rushed to market as universities sought to take advantage of the dramatic market demand;
- The programs offered in 1999 tended to use the name EC. Later, in 2000, some new programs preferred to use the name EB and, in fact, most of the programs originally using the name ‘EC’ later modified their degree title to ‘EB’. Clearly, fashion and topicality were important issues for these new degrees; and
- The content of the programs has continued to change as the technologies underpinning EC/EB themselves underwent rapid changes, and this led the programs to evolve quickly to meet market demand.

The EC/EB programs I studied showed many of the hallmarks of ‘new service products’, as defined in Chapter 5 of this Thesis – and the behaviours of the program developers showed a somewhat puzzling mixture of market awareness (in areas such as naming and branding, in the provision of multiple exit points for greater flexibility, and in the rapid updating of subject contents to ensure the most topical possible coverage of material) combined with the more common academic focus on traditional educational program development. The developers did not take a formally market-oriented approach towards the development and structuring of their degrees and subjects – and their focus in getting the products to market was very typically academic in its approach.

Since it has become clear throughout this Thesis that the traditional pedagogically-oriented curriculum development models, which mainly focus on the cohesion of subjects, may not suit the development of new degree programs designed to capture a short-term market niche (such as EC/EB), some other alternative is needed.

To summarise, the answer to question SRQ1 is:

**SRQ1 What are the relative roles of pedagogy and market orientation in constructing EC/EB tertiary educational programs?**

Most EC/EB program developers are very focused on program curricula. On the basis of the theoretical and empirical evidence I gathered during this project, it
became apparent that universities need to be more flexible in adapting marketing elements so as to enhance the effectiveness of EC/EB program construction. The roles of pedagogy and market orientation in constructing EC/EB tertiary educational programs are complementary and my empirical findings made it clear that successful fee-based programs depend on both a thorough understanding of the nature and demands of the local market, as well as on the more academically-oriented ‘traditional’ pedagogic degree foundation.

SRQ2. What are the features of the development of educational service products — the degree programs?

Traditional pedagogic program development has always concentrated on the curricula, the objectives and the learning outcomes of programs. The marketing approach for offering a new educational service product continues to stress these issues as important – they are regarded as the core service of the product. However, in order to develop the programs (the new educational service products) effectively, other elements, which are considered to be major supports to the service products, must also be developed simultaneously. These include the newness of the product, product quality, product distinctiveness, product adaptability, facilitating services and service evidence which shows the variety of job opportunities to graduates (refer to Section 5.4.2). The empirical evidence I collected during this research project showed that these supporting elements are generally omitted from traditional program development – and were often omitted from the development of EC/EB programs.

The other major aspect of developing the service product is service distribution. This includes how to distribute the product, the distribution strength, distribution strategy, whether there was sufficient expertise to distribute the program, and the importance of effective communication – the branding and positioning of the product which provide customers with reassurance when they decide to purchase the product.

Finally, the market support elements such as market knowledge, local image, advertisement/promotion and financial terms must also form an integral part of a market offering of a new educational service product.

To summarise, the answer to question SRQ2 is:

SRQ2  What are the features of the development of educational services products — the degree programs?

The combination of theoretical research and empirical data gathering indicated that the special features of the development of EB/EC degree programs which are different from the traditional pedagogic approach to new degree program development fall primarily into three major categories – service product, service distribution and marketing support.
SRQ3. What is the nature of EC/EB degree programs?

I have discussed the findings of this question in detail in Chapter 6, on the basis of the three surveys of EC/EB program development within the AP region I carried out during the period 1998–2003. The pedagogic nature of EC/EB programs was discussed in Section 6.1.2.2. Here I briefly summarise the results:

- In the AP region, tertiary EC/EB programs developed very slowly at first. From 2000, however, there was a sudden rush to develop EC offerings as the dot.com boom reached its peak. By 2003, almost every university in the AP region offered an EC program or course.

- EC/EB degree programs with predominantly intangible core attributes can be regarded as educational service products. University intentions in this respect can be viewed as trying to develop new educational EC service products which will meet market expectations for the service product itself – for example, product adaptability and product distinctiveness.

- The distribution strategy of EC/EB programs over the period of my research project was moving from traditional face-to-face course provision towards online degree provision. IT facilities therefore played a major role in developing these new programs.

To summarise, the answer to question SRQ3:

SRQ3 What is the nature of EC/EB degree programs?

The pedagogic nature of the surveyed EC/EB degree programs was quite similar, so that there was considerable overlap between the programs on offer, and yet some topic areas were not covered at all. The marketing nature of the surveyed EC/EB degree programs within universities in the AP region involved a rush to offer EC/EB programs circa 2000 in order to meet the market demand, so that the product distinctiveness of these programs was questionable.

SRQ4. Are EC/EB programs service products?

I have argued in the previous section, Section 6.4.1, that EC/EB academic programs are in fact service products; and that appropriate marketing techniques should be employed during their development and operation. However, most EC/EB developers appeared either not to be aware of (or placed comparatively little emphasis on) the “elements” requiring attention when developing their new service products. Rather, they focused on the guidelines laid down by their own university for developing all new academic programs, putting considerable effort into the structure of the program and into successfully pushing the applications through the various academic approval committees within their institutions. Once approval had been granted, they generally
rushed their product to market as quickly as possible, without an orchestrated marketing or promotion campaign.

To summarise, the answer to question SRQ4 is:

**SRQ4 Are EC/EB programs service products?**

EC/EB academic programs are service products, although the universities studied did not appear to regard them in this light. Greater emphasis on the use of appropriate marketing techniques could (and should) be employed during their development and operation for maximum effectiveness.

I have answered the first four subsidiary research questions (SRQ1 to SRQ4), on the basis of my empirical findings and my analysis of marketing theory as it relates to new service product development. These four answers together form the basis for answering Part “a” of the principal research question.

**Part “a” Principal research question**

**Are universities flexible enough to develop their EC/EB programs effectively through**

a) explicit recognition of their market-oriented nature?

In this Thesis, I have argued that EC/EB degree programs are service products (answers to SRQ4). Most of the surveyed EC/EB program developers only focused on the curricula of the degree programs, although my empirical findings during this research project make it clear that the relative roles of pedagogy and market orientation in constructing EC/EB tertiary educational programs are complementary – the pedagogic component (the curriculum of the program) is important, but the marketing component cannot simply be ignored (answers to SRQ1). I found that the development features of the degree program, based on the marketing concepts literature, can be grouped into three major categories – service product, service distribution and marketing support (answers to SRQ2). The pedagogic nature of the surveyed EC/EB degree programs meant that there was considerable overlap between the subjects offered within the degree programs surveyed, although a number of critical areas were not covered at all. The ‘fashionable’ nature of the surveyed EC/EB degree programs universities in the AP region at the time of the research project meant that there was a rush to offer EC/EB programs during and shortly after 2000 in the hope of meeting burgeoning market demand, which meant that the product distinctiveness of these programs was, in a number of cases, questionable (answers to SRQ3).
As I have already suggested in Section 8.6, the answer to Part “a” of the principal research question is both ‘yes’ and ‘no’ – with the answer largely depending on the ‘mindset’ and ‘personal values’ of the individual program developers. The answer ‘no’ was deeply rooted in the minds of many program developers. They still concentrated almost entirely on the curriculum of the new program and the manner of obtaining approval from their university administration. Attitudes varied widely – a few of those I spoke to considered all the elements I have identified in my NESPO model, while other program developers considered almost none of these elements. This is not to say that the products (new academic programs) thus developed were not up to standard, but they were unlikely to be ‘innovative’ or to meet the ‘newness’ criteria in my model relating to ‘good quality’ and ‘distinctive’; and tended not to be ‘adaptable’ to different demands in the market. This, in turn, meant that some of these new programs were not able to enhance the competitive advantage of the offering institution. The durability of these products (academic programs) is thus somewhat questionable.

9.2.2 Engagement with the concept of new service product development – answers to Part “b” of the principal research question

**SRQ5. How have universities made use of new service product concepts in creating EC/EB programs?**

The findings from the multiple-case studies showed that EC/EB program developers and co-ordinators had only made use of some of the service product concepts in creating EC/EB programs, including:

- awareness of the “local image” of their own university in the minds of current and prospective students by the majority of the EC program developers and co-ordinators;
- creation of a well designed and packaged web site detailing new EC/EB degree programs and linked to the main university web page by many of the EC program developers and co-ordinators on the assumption that this would be one of the most effective advertising tools possible for the program(s) – even though these sites generally stopped well short of actually offering EC facilities;
provision of multiple exit points from a masters program to provide flexibility to students and hence increase product adaptability of the service product;

awareness that online delivery is a fashionable approach to support the distribution of EC/EB programs and is gaining increasing popularity from universities – although most of the surveyed universities were using only online support for face-to-face teaching, rather than moving to full online mode of delivery.

EC/EB program developers were not aware of the following service product concepts:

- most EC/EB program developers did not emphasise, nor had they even thought of, making use of facilitating or supporting services to increase the competitive advantages of their respective EC/EB programs;
- inter-personal communication within the EC/EB programs surveyed was clearly seen as a one-way process – staff information to students was viewed as considerably more important than student feedback; and
- the lack of market research activity by most surveyed universities appeared a little surprising in view of the rapidly-changing nature of the teaching material and the market-place itself.

Interview responses made it clear that the newness of an educational service product is not directly related either to the development time required, nor to the presence of top management support. It was, however, also noticeable that many (if not most) of these programs ultimately had inadequate resources to meet the expectations of their sophisticated and experienced student bodies – either in terms of computing facilities and classrooms of sufficiently high quality, or in terms of the teaching resources available (once again, quality was the issue).

To summarise, the answer to question SRQ5 is:

**SRQ5 How have universities made use of new service product concepts in creating EC/EB programs?**

EC/EB academic program developers made use of some new service product concepts including awareness of the local image, promotion, product adaptability and the distribution methods of the degree programs. However they were not well aware of the facilitating or supporting services, interpersonal communications and market research of their own service products – EC/EB degree programs.

**SRQ6. How could new service product development be better used in creating programs?**
I have discussed these findings in Section 8.6. From the interviews, I found that almost all universities I selected were attempting to catch up with the “fashion” market niche. They did not realise the need to study the marketing methods of other service product developers to ensure that their entry into this niche was properly positioned. The findings of the interviews suggest that EC/EB degree program developers would benefit from taking a more market-focused view of their new offerings. I believe that the NESPO model offers potentially helpful advice for the developers of new degree programs which are endeavouring to fill a rapidly-moving market niche. Developers of such programs should not merely consider the curricula of their programs (in my model, this is referred to as the core service), but must also take other components into consideration – primarily service product, service distribution and marketing support. The first component, service product, describes the nature of the new offering, and the elements of this service product include the core service (curriculum), newness (of the programs), product quality, product adaptability, product distinctiveness, facilities services and service evidence (the career opportunity of the graduates). The second major component is service distribution, which consists of the strength and strategy of the distribution, effective communications (branding and positioning of the product), staff members’ skills and training and the follow-up service for graduates. The third major component is marketing support, covering whether the developers have market knowledge (on their own or through the hiring of consultants) on the product, the local image, the advertising/promotion of the product and finally the financial terms of the product.

To summarise, the answer to question SRQ6 is:

**SRQ6  How could new service product development be better used in creating programs?**

When the program developers build up their new programs, they should not merely consider the curriculum of the program (in my model, referred to as the core service), but other components such as distribution strategy and marketing support for the degree programs as well.

I can now pull these two threads together into an answer for the whole of part “b” of the principal research question:

**Are universities flexible enough to develop their EC/EB programs effectively through**

**b) engagement with the concept of new service product development?**

In this Thesis, the results from the interviews of the multiple case studies indicated that most EC/EB academic program developers had employed only some new
service product concepts such as awareness of the local image, promotion, product adaptability and the distribution methods of the EC/EB degree programs. Developers were not aware of other issues such as facilitating or supporting services, interpersonal communications or market research to support the EC/EB degree programs (answer to SRQ5). The results also indicated that when EC/EB program developers create their new programs, most of them just consider the curriculum of the program, largely ignoring other components of the new service product offering, such as the distribution strategy and the marketing support of the degree program (answers to SRQ6).

The answer to Part “b” is, therefore, ‘No’ – at least as far the surveyed sample group is concerned. Most universities are NOT flexible enough when they offer new degree programs. Most program developers of the surveyed universities did not explicitly recognise the market-nature of offering the new programs and did not fully employ new service product concepts for program development (answers to SRQ 5). When developing a new program most EC/EB program developers concentrated on the curriculum of the program, with few exceptions, for example: Universities A1, H5 and N1. Other components of new service product offering concepts were not employed (see my answer to SRQ6). I would therefore say that the surveyed universities are NOT sufficiently flexible to develop fast-moving, ‘fashion-oriented’ niche degree programs (such as EC/EB) effectively because they do not explicitly recognise the market-oriented nature of the new service product – in the case of my particular research project, EC/EB degree programs.

Universities are now moving into a ‘quasi-market’ era, where many degree programs must be viewed as service products. The result of this research project indicated, however, that most program developers did not explicitly recognise the market-nature of offering a new degree program (as at May, 2003) as such.

I hope I have made clear by means of both theoretical and empirical evidence that universities should be more flexible in adapting marketing nature elements so as to enhance the effectiveness of constructing EC/EB programs. A new educational service product offering (NESPO) model, developed on the basis of the literature relating to new service product offerings is both appropriate for offering these new market-oriented programs and marks a major contribution by this research project. In the near future, I would be interested to follow this issue up further.
I have answered the research questions of this project in this section. In the next section I will present the conclusion of this project.

9.3 Conclusions

This research project has addressed the nature of EC/EB programs in the AP from both the pedagogic and marketing perspectives. Issues related to EC/EB programs such as the creation of the EB component model, EC career opportunities, and the sophistication and transaction-support facilities offered by EC degree program websites have been explored. The Thesis also provides an overview of EC/EB programs in the AP from 1997 to 2003 and the results support the argument that EC/EB programs are service products, as they possess many of the marketing-dependent characteristics which such products display.

The findings from the surveys and case studies I undertook as part of this project showed me that EC/EB program developers very seldom made use of the concept of new service products when developing their programs. New programs were launched into the market as a result of external competitive forces from other institutions and internal pressure from within the university. EC/EB programs market entries therefore tended to be rushed — the majority being developed over a six to twelve month period. Inevitably, several important marketing elements, such as product quality and product distinctiveness, could not be clearly and carefully considered by the program developers (of course, there were some exceptions). EC/EB program developers rarely considered provisioning of special facilities/equipment specifically prepared for the EC/EB programs in order to enhance the product’s competitive power against external competition by similar products – and even when they did, those resources were rarely forthcoming.

Most program developers realised that follow-up services such as students’ alumni are advantageous to the programs in order to maintain a short and long-term good relationship between graduates and universities. Such follow-up services, however, were mostly not in place due to a lack of time and resources. Omitting all or part of these elements when offering the new programs will lead to a shortening of the product’s life – or even to a complete loss of competitive power against similar products launched by other institutions and universities. Universities, even in those parts of the world where corporatisation is seen as not only inevitable but advantageous, do not appear to be following-through the logic of ensuring that their
products and services will meet the required standards of quality and attractiveness, in a fiercely competitive world.

Seizing exactly the right opportunity to launch a new program was also a critical factor for the success of the new degree. This was illustrated by one of the cases – the Hong Kong University of Science and Technology. In 1995, they were at the very forefront of the technology and offered the first EC subject, but at that time, the concept of EC had not been cultivated in the minds of Hong Kong residents and fewer than ten students enrolled in the subject. By 2000, with the push from the market-place and from government, EC/EB started to gain social acceptance and the concept of EC/EB began to grow in popularity, with the results that the number of applicants for the various programs on offer was several times greater than the total number of places available in all the Hong Kong institutions combined. While it is obvious that luck plays some part in being at the right place at the right time, it is also clear that those universities engaged in environmental scanning are the ones best placed to take advantage of opportunities as they arise.

Universities are now moving into an era of ‘quasi-market’. Launching new programs may help to enhance their competitive power and increase their revenue – but to be successful in this activity they must also learn to behave (to at least some extent) like the corporations they are emulating. EC/EB as a market phenomenon is coming towards the end of its “cash cow” period and will shortly enter into what marketers call the “dog” phase, where numbers of new programs and students wishing to enrol in them begin to decline at an increasing rate. But there will be other, equally fashionable and exciting new degree program opportunities available for those universities sufficiently aware of the market-place movements.

As ‘time factor’ and ‘market opportunities’ are so critical for offering new programs, successful universities will be forced to change their conservative mindset and make full use of the new service product offering concepts (NESPO) in effectively planning and launching their new programs.

9.4 Research Contributions

The contributions of this research project can be divided into two major areas: theoretical and practical. In terms of contributions to theory, I have made two major contributions.
Firstly, I have revisited and analysed a variety of theories in the areas of both curriculum development approaches and new service product development. While my work in curriculum development served largely to convince me that this field was less relevant to the effective creation of rapidly-moving new educational programs, my contribution in the area of new educational service product has been considerably greater. The development of the NESPO model makes a genuine contribution to theory, applying well-known marketing theoretical concepts to the field of EC/EB. The NESPO model itself is not merely a copying of an existing model, but is a hybrid built from a variety of sources and targeted specifically at my own topic – the offering of new educational programs in EC/EB – and which could equally easily be applied to the offering of any similar, rapidly-moving and cross-disciplinary degree programs.

Secondly, my study of academic program development indicated that research into program development has so far suggested that it is always pedagogically biased and influenced – universities only develop academic programs for pedagogic reasons. This research project, however, makes it clear that there are, in fact, multiple possible reasons for developing new academic programs. The “true” reasons might still be pedagogical in nature, but they can also be industry and market focused. A university might need to develop new programs regularly to show others of their strength and specialisation. That is clearly a form of new service product offering but it should be carried out in a different way — in terms of enhancing the financial position of the university as well as its image.

In terms of contribution to practice, I have provided a number of scenarios for developing new programs which will be of significant assistance – both to subsequent researchers investigating the existence of multiple models for the development of new degree programs at universities (this is really a third contribution to theory) but also, more immediately, to program developers working to put together new degree programs designed to bring in fee-paying students for their universities’ leading-edge new program offerings. In essence, program developers need to develop a wider view - ranging from why any particular program is developed, to the adoption of the elements contained in the NESPO model I have developed for program development. The findings of this research project offer real and practical benefits for both university administrations and for the individual program developers and coordinators.
Other supporting evidences for the contributions made by this research project are:

- Papers related to this research project have been accepted at a number of international academic conferences and a book chapter – and these are listed in Appendix V-1;
- My EC/EB educational web sites are referred to by other well-known web sites (including those of the CollECTeR inter-university initiative, and Roger Clarke’s well-known EC web site), see Appendix V-2;
- I was targeted for an interview by a reporter of the Age, one of the leading Australian newspapers, to express my views on EC/EB education. My opinions on this specialised field, together with those expressed by other prominent EC/EB interviewees, were published on 15 August 2000, p. 7 IT2 section. (refer to Appendix V-3);
- I have received numerous emails from academics worldwide, seeking my advice on EC/EB study at the masters and doctoral levels in Australia;
- During the early stages of this project, Ms. Barbara McCartney of the University of New England (in New South Wales) informed me she had used one of my papers (Chan and Swatman 1999) as part of her reference to apply for a grant for her EC project and that the grant application had been successful;
- To my knowledge, several of my papers have been recognised and quoted in other academics’ work (this list, which is not exhaustive, includes Hecht (2000)\textsuperscript{54}, Dean and Nasirin (2002, p.382)\textsuperscript{55} and Gray (2002, p.220)\textsuperscript{56}).

9.5 Future Research

There are, of course, many possibilities for extending the current research project. In the interests of space, I restrict myself to two separate groups of future research proposals – those which arise directly from the empirical research reported here, and four suggestions for future projects which are of broader applicability.

\textsuperscript{54} Hecht, I. 2000, ““e”: The Milennial Reality for Business and Education’, Proceedings of New Zealand Diploma of Business Conference, Christchurch, New Zealand, 5-7July.

Future work possibilities group 1:

The first group, extensions which have arisen directly from the surveys and interviews undertaken for this research project, relate to the empirical work described in Chapters 6-8:

In *Chapter 6*, in which I describe the outcomes of three quite separate surveys, I identified four possible research projects:

- A study of the balance between new educational service product distinctiveness and the resources available to program developers. One of the major problems faced by all the program developers who responded to my surveys was the lack of resources (human, financial and material). Such restrictions often limited the attempts by the program developers to offer a unique “edge” to their new programs – and it would be most interesting to study a variety of resource-dependent educational program innovations, with a view to cross-correlating their resourcing and their ability to create a distinctive product edge. This study would most appropriately take the form of a follow-up survey of EC/EB degree-offering universities – preferably a phone-based survey;

- One of the interesting phenomena I uncovered during my surveys was the activities of those universities which had chosen to offer multiple, competing EC/EB programs. I was not able to spend sufficient time to tease out the full motivation for this decision at each of the universities concerned – and it would be fascinating to endeavour to understand why each of these universities made this decision. Was the reason political, historical or financial? Or was it none of these? Such a study would need to be undertaken as a series of in-depth interviews, supported by an analysis of documentary evidence (content analysis);

- I noted that many of the universities chose to alter the name of their degree programs from EC to EB once the newer term had begun to receive wide coverage in the public media. Nomenclature has the potential to add significantly to service product branding – and a survey of past and present students of EC/EB degrees would cast an interesting and informative light on just how important this issue really is to the target group most affected;

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One unresolved question concerned the match between the new EC/EB programs and each university’s own mission. Uncovering this information would be a two-stage process, involved first a content-analysis exercise, followed by further interviews with the program developers (and ideally, with the Deans of the Faculties concerned). It would be fascinating to know whether a good match led to greater marketplace success – or whether this issue was actually irrelevant.

Chapter 7 contained the analysis of two studies which cast a sidelight on aspects of the NESPO model. One issue which emerged from the analysis of EC/EB program web sites was the difference in level of sophistication between the Australian and Hong Kong university sites. It was impossible to follow this issue up at the time — but a good, Honours-sized project would involve a further analysis of these sites, combined with a socio-economic and contextual analysis of the differences between these two countries (including such issues as legal restrictions on payment options available for web sites).

In Chapter 8, I reported the findings from my interviews with EC/EB program developers. One issue I was not able to resolve was how useful course advisers and Industry Committees had been, owing to the very small numbers of new programs which made use of either of these advisers. As the EC/EB degree offerings become better established, I would be interested to follow this issue up further, re-interviewing as many of the program developers as possible to find out whether any of them have now made use of such bodies and, if so, how useful they found them to be.

Future work possibilities group 2:

In addition to the specific extensions which flowed from my empirical work itself, I have also identified four additional research projects which would add to the study reported in this Thesis:

I. The present work is restricted to the AP region. It would be of great interest to undertake repeat surveys and interviews in Europe, South America and in the rest of Asia (particularly countries such as India, Japan and South Korea where EC activities are significant) and compare the findings with those I report here. How representative is the AP region of world activities in tertiary EC/EB education?

II. Empirical data for testing the validability and reliability of NESPO now needs to be carried out. This project has made use of inductive
research — the model was developed over a period of years and tested as it was developed. It has now reached the point where deductive research can be undertaken. Clearly, repeating the surveys and interviews in other regions, as suggested in I above, is an example of such deductive research – but it would also be interesting to extend the theoretical basis of the model by searching for other elements which might be relevant to new EC/EB educational service product development.

III. EC/EB education is coming towards the end of its heyday. I believe that the NESPO model will apply equally well to other market-oriented new degree program development — but this can only be established by means of further theoretical and empirical research. This has the potential to be a major extension of the present research project, which could be undertaken across a whole range of degree programs — and, naturally, across a range of geographic regions.

IV. One of the issues raised by many of the respondents to both surveys and interviews (and an issue which is being raised in the press by increasing numbers of academic commentators – particularly in the US) is that following the dot.com crashes of 2000 and 2002 and the telecommunications crisis of 2002, EC/EB programs are no longer so ‘fashionable’ and that EC/EB topics are (or will be) gradually absorbed into more general business degrees. A follow-up survey, to be undertaken in a year’s time, would help to answer this question once and for all — just what is happening to EC/EB educational programs?