Singapore Management Journal

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Editorial Board

Editorial Comment

All organisations, particularly educational institutions, whether in the private sector or the public domain, should aspire to be learning organisations. Such would then focus on the four primary (CASH) functions of Creating Knowledge, facilitating Access to, and Sharing of Knowledge, and Harvesting of the created knowledge. Their effectiveness and efficiency will be measured by the Lyotardian Law of Performativity that mandates that human knowledge in a postmodern knowledge-intensive society constitutes their social justification on the basis that it works, produces results, and is useful.

This is what Singapore strives to be better in – productive knowledge that has utility, promotes economic progress, and advances the welfare of its citizens. This comes about by moving away from a representationalist paradigm which views human knowing as received or discovered knowledge of the real world (Kant's 'noumena': things-in-themselves) - to settle for the more modest, pragmatic endeavour of knowledge as creative acts to produce socially justified belief.

This is also the social justification for the launch of the Singapore Management Journal, which aims to promote academic writing and research particularly among postgraduates and faculty of educational institutions. Accepted articles must be original work, and can be single research studies, integrative research reviews, theoretical papers, and "action research". The articles in this inaugural volume represent selections within this range. We want each volume to reveal both the intellectual fertility of our business and management professionals and their creativity in producing 'knowledge that works'.

Readers are encouraged to contact the authors directly through their email addresses listed as part of their biodata.

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"People can only live fully by helping others to live. When you give life to friends you truly live. Cultures can only realise their further richness by honouring other traditions. And only by respecting natural life can humanity continue to exist. "

- Daisaku Ikeda

Cultural Acclimatisation: Foreign Students Studying in a Private Educational Institution in Singapore

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Abstract

This article examines the problems of acclimatisation and coping strategies of foreign students based on a sample of twelve Chinese students studying at one private educational institution in Singapore. Drawing on the findings of Furnham (1997) and Murphy-Lejeune (2002), among others, the present study looks at the reasons why the participants decided to travel overseas, why they chose Singapore as their destination, what problems they encountered while here, and how they coped with these problems. They were also asked what specific problems they encountered with the schools they enrolled in. It is the contention of the present study that the school has a major influence on their overall acclimatisation. Suggestions were sought from the participants on ways they thought the school could help make their stay here more successful.

The in-depth interviews found that the main problems encountered by the Chinese students were with accommodation, student agents, school, language, and the attitude of the local populace towards them. To cope with their problems, they relied on friends and family for support and information, and used modern technology for communication. They expected the school to help them find suitable accommodation and practise higher standards of service.

The article concludes with recommendations for further actions needed by schools and government, and areas for future research.

Keywords: Cultural Acclimatisation, Acculturation, Separation Reactions, Language Difficulty, Coping Strategies, School Social Support, International Students, Psychological Well-being, Foreign Students, Higher Education

Introduction

The number of students who venture out of their home countries in pursuit of higher education has been growing over the last few years. In a September 2006 report entitled 'Education at a Glance', the OECD noted a doubling in the overall number of students going overseas for tertiary education – increasing to 2.7 million from 1995. This growing trend has reinforced academic interest in the experiences of the foreign students in their new environment. Papers have been published that look into the problems concerning cross-cultural adjustments to a different climate, diet, language (just to name a few); how the foreign students cope with these problems; and the factors (personal or otherwise) that affect the extent to which the foreign students are able to handle the new environment.

Most of these studies are focused on the US and European contexts, where the majority of the foreign students go, and few scholarly studies exist that look at their experiences in the Asian context. This is unsurprising, given that more than half of these students chose to study in just four countries – the US, Britain, Germany, and France (The Straits Times, 30 August 2004). A survey of the literature shows that even less has been written about the experiences of foreign students in Singapore. It is contended here that understanding the problems of these sojourners and the coping mechanisms they adopt to overcome or resolve these problems is an important first step in the strategy to position Singapore as a world-class centre for education.

A survey of the literature found that the experiences of foreign students in Singapore have not received as much attention from researchers as they deserved. Hence, this research set out to uncover the problems that foreign students, specifically from one important market, China, faced when newly arrived in Singapore. A secondary objective was to understand the ways by which these students coped with such problems. One major thesis of this research being that problems associated with school must have some impact on the well-being of students, another objective was to find out what problems the students faced concerning schooling in Singapore.

Literature Review

There is extensive literature on the coping mechanisms adopted by the foreign students. For the purpose of this literature review, international students, students participating in exchange programmes, students studying overseas, etc., will collectively be described as 'foreign students' in this paper.

As Furnham (1997) notes, foreign and exchange students have been the topic of academic research for a very long time (Bock, 1970; Brislin, 1979; Byrnes, 1966; Furnham and Tresize, 1983; Tornbiorn, 1982; Zwingmann and Gunn, 1963). Much of the material concerns the experience of foreign students who study in the US and Europe. Murphy-Lejeune (2002) examines the experiences of students who spent a year abroad in a European country.

Problems Faced

Furnham and Tresize (1983) suggest that problems facing the foreign students are threefold:

- Problems of living in a foreign culture (racial discrimination, language problems, accommodation difficulties, separation reactions, dietary restrictions, financial stress, loneliness, etc.);
- Problems of late-adolescence/young adults asserting their emotional and intellectual independence; and
- Academic problems associated with higher educational study.

Coping Mechanisms

For Asians, having stayed longer in the country in question did not necessarily result in better adjustment. Chinese students as a group were found to have the greatest adjustment problems to college (and therefore stress symptoms) than the Indians or Americans, perhaps due to having to learn a new language (Shenoy, 2000). Qian Ning (2002) tells of students who said they needed a sense of belonging to feel happy. Chinese students who were used to a collective lifestyle and care provided by government, turned to other groups when they came to America, e.g. the church.

Church's work (1982) identifies potential areas of difficulty such as monetary problems, language difficulties, adjustment to a new educational system, and social adjustment to the new *milieu*. It also quotes works on predictors of adjustment by Searle and Ward (1990), Ward (1995), Ward and Searle (1991), Ward and Kennedy (1992, 1993a, 1993b, 1994), such as cultural distance, acculturation, language difficulties and coping strategies. It notes that psychological problems in relation to cross-cultural adjustment have not been widely studied, and that little is known about the adjustment problems or stresses that foreign students experience in comparison to the local student population in the host country.

In terms of coping mechanisms, Myburgh, Niehaus, and Poggenpoel (2002) focus on two themes: use of external resources, and reliance on internal resources. Respondents maintained contact with family and friends back home, making extensive use of modern technology like the telephone and Internet. They also used their interpersonal skills to get accepted in local social and religious circles, cognitive skills to learn the local language (presumably English), and acknowledging their personal efficacy and self-worth by pampering and treating themselves frequently.

The Singapore Context

The literature on foreign student experiences in Singapore is woefully deficient. A few short works can be found in the Chinese language, but none of these is based on a rigorous research methodology. Examples of Chinese language literature on this subject include MaYufeng's Jie du Xinjiapo "Chinese students in Singapore" (1997); and Qi Wei (2003) on "Chinese students Singapore". The most recent piece of writing is a compendium of narratives recorded by Yu Miaomiao (2006) entitled '*Ren sheng*

li cheng cong ci bu yi yang', published by Candid Creation Publishing, Singapore. In this compendium, Yu, who studied in the National University of Singapore in 1998 and stayed behind to work in the computer industry for three years, interviewed 14 students from China who studied in the National University of Singapore and Nanyang Technological University in Singapore. Most of these students came at a very young age and stayed for many years, studying in secondary schools and going on to the universities. Using a narrative style, and without attempting to draw conclusions or theorise, Yu focused on the interviewees' reasons for coming to Singapore, and recorded their impressions, lessons learned, and aspirations about their future. Among other things, the interviewees vocalised the difficulties they experienced attempting to master the English language, the prejudice they encountered from Singaporeans who thought of them as being backward, coarse, and materialistic, the problems they initially faced with the local food (too bland), the weather (too humid), and accommodation (too expensive). All of them said they felt lonely, with few local friends at the beginning, and having to learn to be independent very quickly. Some of the interviewees expressed happiness over having so much freedom and independence, to live the lives they wanted, the studies they wanted to pursue, to move about and mix around. Some were scared of this new-found freedom at first, but all of them said they grew to accept and enjoy this freedom. Besides socialising with the local people, they depended a lot on the networks they formed among the Chinese students themselves – for information, advice, and emotional support.

Apart from the published literature, the daily newspaper is another source of information on the subject. In a special report on foreign students in Singapore entitled "A Class Apart", The Straits Times (December 3, 2006) wrote that some of the students griped about homesickness, loneliness, being shunned by Singaporeans and being treated like outcasts. It quoted the experience of a student from Madagascar whose attempts to chat up Singaporeans on the bus and MRT were always spurned. Others, particularly male students from India, had to be careful to dress up smartly to avoid being mistaken as labourers or construction workers.

The studies reviewed above prove that there exists a rich tradition of research into the problems encountered by foreign students. These problems are wide ranging, and can be grouped into problems of living in a foreign culture, problems of growing up, and problems with academia. The studies make the point that the degree of success that such students have in adjusting to their new environments have a direct impact on their studies, and their personal psychological well-being. They are also concerned with the coping skills of the students.

While the body of research in this area is mainly focused on experiences of foreign students in Western countries (including Australia), the literature on the situation in Singapore proved rather skimpy. Little, if anything, has been written about the experiences of foreign students in Singapore. By focusing on the situation of some of the Chinese students in a private educational institution in Singapore, it is hoped that the present study can add an Asian perspective as well as fill a gap in the knowledge of

how foreign students live in Singapore.

Method

Using a conceptual framework adapted from Furnham and Tresize's (1983) model, problems facing foreign students can be classified into external and internal factors, and coping mechanisms can also be classified into external and internal mechanisms.

External factors are environmental factors that are usually beyond the control of the students themselves: racial discrimination, language, accommodation, food, and climate. Internal factors are those that are usually within the control of the students, and these include loneliness, stress, separation reactions, lack of social network, personality, locus of control, and health.

The second part of the conceptual framework is about the coping mechanisms adopted by foreign students. These can be grouped into external resources and internal resources. External resources include social support, use of technology such as the Internet and the mobile phone, religion, exercise, learning a new language, training for inter-cultural skills, use of artefacts, while internal resources include acknowledging self-worth, self-examination or introspection.

A list of the interview questions is given below.
1. When did you first arrive in Singapore?
2. What are the problems that you faced when you first arrived in Singapore?
3. How did you cope with these problems?
4. Have you adjusted to life and study here?
5. How satisfied are you with the support you are getting from the school in adjusting to life here?
6. How would you like the school to help you?

Twelve Chinese students (six male and six female) were chosen through personal contact. They had a mean age of 19.4 years when they first arrived in Singapore, and had been staying in Singapore for an average of 3.33 years at the time of the conversations. They were interviewed in-depth outside normal classes over a period of about one month in the middle of 2005. The conversations in Mandarin were recorded on tape with the knowledge and permission of the participants. The transcripts were then translated into English.

The profiles of the twelve participants are briefly presented in Table 1 below.

Table 1: Participant Profile

Name	Year arrived	Years here	Age on arrival
Female			
Fiona	Dec-01	4	18
Pauline	Dec-01	4	22
Wei	Jan-02	3	18
Ma	Dec-02	3	22
Chen	Dec-02	3	18
Wang	Dec-02	3	18
Male			
Li	Apr-01	4	18
Liu	May-01	4	20
Xu	Sep-01	4	19
Tian	May-02	3	21
Zhou	Sep-02	3	19
Wu	Feb-03	2	20

Major Findings

In analysing the responses from the twelve participants, it was noted that there were no perceptible differences in problems or coping strategies between those who were older in age upon first arrival, and the younger ones. Neither were there many differences in the problems concerning acclimatisation between those who had been here longer, and those who were newer arrivals. Except for the feeling of homesickness, males saw the problems in the same light as the females, and coped in almost similar ways. In other words, this study found that the problems of acclimatisation and the coping methods were universal among the Chinese participants.

The main reasons why the participants came to Singapore were primarily to learn English and to obtain better paper qualifications. Singapore was chosen as the preferred destination primarily because of its reputation as a safe and clean place with a multilingual environment. Its Chinese-speaking environment also makes acclimatisation supposedly easier. Singapore's proximity to China was also an attraction to the participants. These findings present opportunities for the government and private schools.

Problems Faced

When answering the question on the types of problems they faced when they first arrived in Singapore, most participants said they experienced problems with accommodation. Other major problems include negative experiences with the local populace, dissatisfaction with the school they attended, and having to change school. Inability to communicate fluently in English and not having enough opportunities to practise it were also cited as problems. Another notable problem was with student agents. Other lesser problems concerned the quantity and quality of food, homesickness and missing home. Money was not a major concern. Neither was religion, probably because of the open and free attitude of Singaporean society towards religion. The findings generally support what previous researchers like Furnham and Tresize (1983), Murphy-LeJeune (2002), Yu (2006), Lacina (2002) and Poyrazil et al. (2004) also found. What could be different in this study are that agents and school were identified as being problematic, while accommodation was probably cited more often than in other studies.

Coping Strategies

In terms of coping strategies and mechanism, social support in particular, friends among their own Chinese, were the most frequently cited way of handling the problems of acclimatisation. Moving house was the preferred way of coping with the problems of accommodation. Few of the participants had close friendship with people from other countries, not even from the host country, Singapore. Contact with family was another frequently mentioned way of coping. The role of technology was clearly important in helping participants cope with problems of acclimatisation. In particular, participants mentioned the mobile phone, email and MSN chats to connect with family and friends, and surfing the World Wide Web for information. One website, www. sgchinese.com was mentioned as an important source of information. The library was cited as a means of escaping loneliness and finding something to occupy time or to indulge in introspection, as well as being a refuge from the humidity of the weather. Little mention was made of religion as a means of coping.

On the issue of coping methods, the present study also supports the works of others (Poyrazil et al, 2004; Qian Ning, 2002; Leung, 2001; and Yu, 2006) who found friends and social networks as important. This should not be surprising considering that the collectivistic culture of the Chinese (Hofstede, 1994) encourages communal sharing of problems and their solutions. The present study does not support the theory of Bochner, McLeod and Lin (1977) who propose that the third network of multicultural friends and acquaintances provides companionship for recreational, non-cultural and non-task oriented activities. Instead, the present study supports Yu's (2006) thesis that Chinese students depend primarily on the networks they formed among the Chinese students themselves.

The present study clearly established that the mobile phone and the World Wide Web are the pre-eminent tools in helping participants to maintain contact with

friends and family. While other researchers (Qian Ning, 2002; Furnham and Bochner, 1986) found artefacts and religion to be important means of moderating the problems of acclimatisation, very little mention of these were made by the Chinese participants in the present study.

Acclimatisation

In response to the question of whether they felt they had acclimatised to life here, participants gave a qualified affirmative answer. Food and the climate remained factors that still posed difficulties. These uncontrollable factors are handled by own cooking and eating with friends, in the case of food, and finding refuge in air-conditioned places like the library, in the case of the climate.

School support

Since the purpose of coming to Singapore was to learn English and to acquire marketable qualifications, this study devoted much space to understanding the problems of school and how the Chinese students coped with such problems. In this respect, the present study found that participants were unanimous in having less than satisfying experiences with the schools they attended. As with other problems, participants turned to their friends and family rather than their lecturers or school staff for help. Their suggestions for improvement of the quality of support given by schools revolve more around providing jobs or information about jobs, and less about their current problems like accommodation and rogue agents.

Dissatisfaction with the school was rampant. The main reasons were poor service, untrustworthy sales personnel, and unsatisfactory academic performance. Suggestions were made by participants for improvements, such as providing students with jobs and job placements, improving overall service levels, providing hostel facilities or at least information about suitable accommodation, and exercising more control over student agents.

School plays a major role in helping the student to acclimatise to the new environment. Trueba and Zou (1994) suggest that 'the social support that students receive from teachers, administrators, and peers allows them to surmount considerable obstacles and succeed in school'.

From the present study, it is clear that the participants were unhappy with the overall level of support provided by their schools. Discontent was expressed over a wide range of service and quality issues, including perceived absence of attention to the students' needs, inability to fulfil promises, lack of time to attend to the students, poor attitude towards service, and poor performance from sales and academic staff. As one of the participants said, 'With the kind of pricing schemes, the attitude of its sales people and customer service people, I think students will get turned off.'

Under such circumstances, it is easy to imagine that students will hardly turn to the school and its staff for the social support that they need. If so, it will be such a pity that the opportunity for the school to help students acclimatise to life here is missed.

Implications

The present study placed more weight than had other researchers on the problems of accommodation and schooling. It found student agents to be a new issue not previously identified as being a major problem. It lent support to the findings of other researchers concerning the crucial role of social networks of family and friends in providing support and information for foreign students. The present study suggested that such social networks tend to be unicultural and ethnocentric rather than multicultural. Religion and the use of artefacts did not appear to figure prominently among the ways of coping with problems of acclimatisation. Conversely, the present study highlighted the importance of technology in helping foreign students to stay connected to friends and family and to obtain information that helps them to improve their lives.

The present study also offers lessons for school administration and government decision-makers. Good student service and high academic standards are competitive strengths of our country that must never be compromised. Both school administration and the government have to know the needs of foreign students in order to achieve the stated goal of 150,000 foreign students by 2015. Another goal of the government is the long-term increase in the population of Singapore so as to sustain its economic well-being as a nation. To achieve this goal, inward migration of qualified migrants is needed, and in this respect, Singapore is competing with many other nations such as Australia. The present study uncovered the common feeling among participants that their stay here is but a temporary stopover. If this thinking is prevalent among foreign students in Singapore, then it bodes ill for the nation.

Recommendations

Based on the findings of the present study and lessons learned from the literature, a twelve-point checklist summarising the key recommendations for action is provided in Table 2 below, with more detailed discussion of the key recommendations left for future publication due to space constraints.

Table 2: Recommendations for action

Checklist of action items
For School Administration:
1. Provide pre-arrival information.
2. Provide Meet-and-Greet services.
3. Introduce a 'buddy' scheme for all newly arriving foreign students.
4. Provide on-campus hostel facilities.
5. Greater use of information and communication technology (ICT).
6. Compulsory English language classes for all newly recruited students.
7. Arrange job attachments and internship for all students.
8. Ensure all academic staff are fully qualified and properly deployed.
9. Introduce a student council with appointed members.
For Government:
10. Lease land at subsidised rates for private educational institutions for campus facilities.
11. Further tighten current regulations governing private educational institutions to ensure best practices.
12. Maintain an open door policy with regards to foreign educational institutions seeking direct entry into Singapore.

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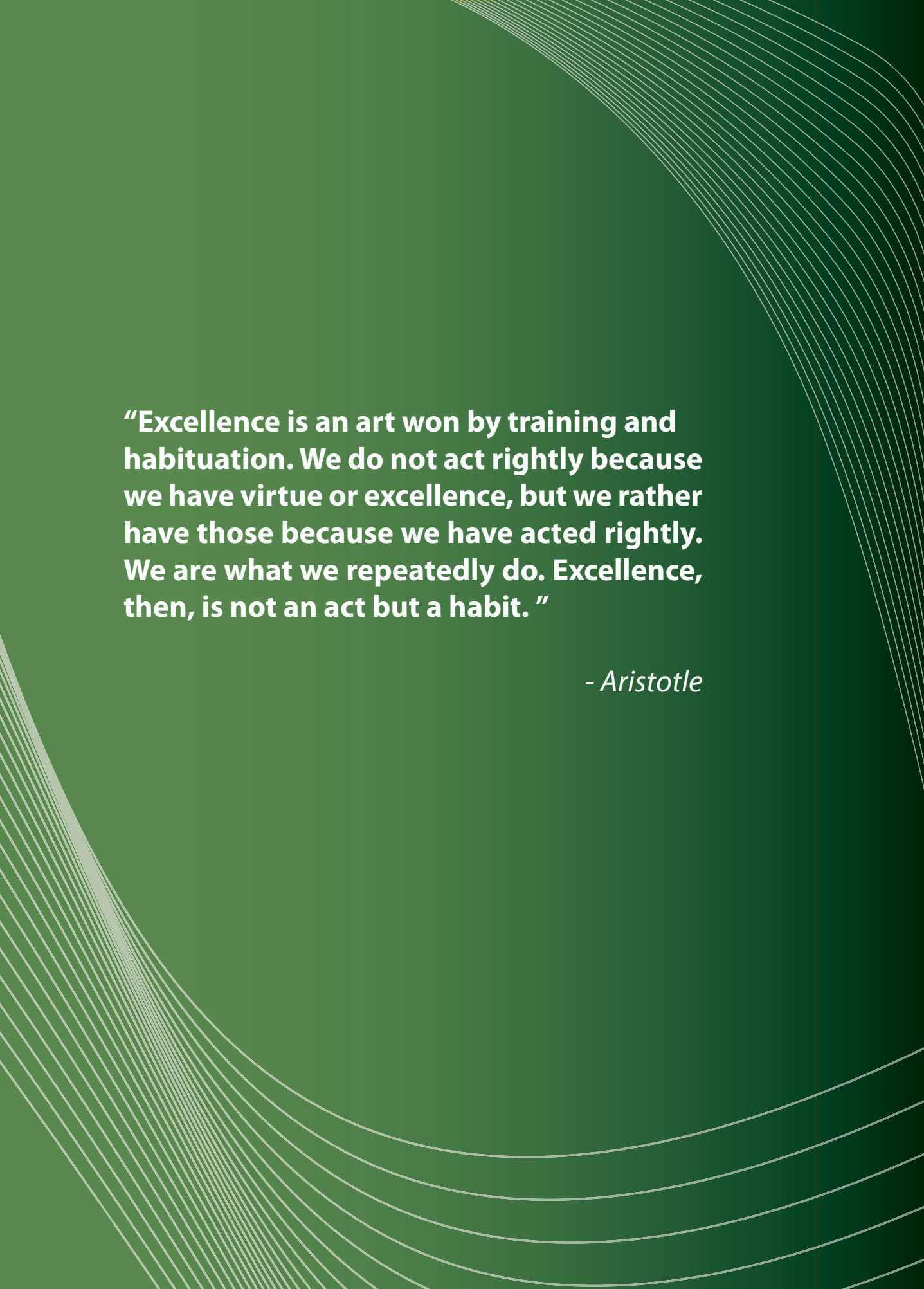
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"Excellence is an art won by training and habituation. We do not act rightly because we have virtue or excellence, but we rather have those because we have acted rightly. We are what we repeatedly do. Excellence, then, is not an act but a habit. "

- Aristotle

Creating a Model of Organisational Excellence

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Abstract

A review of the literature on management studies indicated a paucity of empirically derived data on what Singapore managers do and how management work in Singapore-based organisations relate to levels of organisational performance. A research study was developed around four research objectives, including the design and testing of the Singapore Management Work Survey Questionnaire, the factor analysis of data collected from a purposive sample of over 700 Singapore-based managers, the significant statistical testing of identified management work factors relating to perceptions of organisational performance and the regression analysis of the moderating influence of identified personal and organisational variables of interest on the management work-organisational performance relationship. This research outcome formed the basis of a subsequent exploration on creating a model of organisational excellence that can be seen as a useful and usable template for actual implementation. A four-component model emerged, which became the basis for the construction of a model for Organisational Excellence.

Keywords: Organisational Excellence, Management Performance, Management Work Factors, Strong Organisational Culture, External Adaptation, Internal Integration

Introduction

This paper presents a concept of Organisational Excellence based on the integration of key streams of management studies and research. It originated in the author's 5-year doctoral study on management work in Singapore, completed in 1994. A revisit of that research outcome subsequently led to a 2-stage conceptualisation postulating that management work in Singapore leading to good corporate performance was focused on four areas which can be the basis of a useful model for creating organisational excellence. The four components are:

1. Identifying Needs around which companies and organisations commit themselves to satisfy.
2. Establishing shared Objectives and desired Results.
3. Defining the Work that has to be done together with the Policies and Procedures to establish a supportive work climate.
4. Determining the core Competences needed and empowering people with skills and teambuilding needed to achieve results.

Because the original research focused on management work, other tasks of organisational life contributing to organisational excellence were not covered. A further review of published studies on management work suggested that these tasks should include those focusing on aspects of organisational life and tasks, related to the critical role of the top leadership in mission and vision creation and the transformational impact of such behaviours. Integrating these different strands will lead to a more complete understanding of the components that define organisational excellence.

Brief Review of Management Studies

The history of organisational management studies over the last 80 years reveals a number of trends in terms of research and practice focus. A quick overview will uncover the following:

1. Up to the early 1950s, much of the interest was devoted to finding ways and means of improving the Efficiency of work done. This was initiated by the work of F. Taylor and the Scientific Management revolution. This was also the era of Operations Research and Quantitative Analysis and the genesis of the Productivity Movement.

2. Towards the late 60s and early 70s, attention shifted to Effectiveness, largely through the influence and writings of Peter Drucker, especially in his books, The Effective Executive and Managing for Results. Other names well-known for their ideas on Management by Objectives include John Humble, Bill Reddin and Louis Allen.

3. In the early 1980s, Tom Peters burst on the scene with his ideas on the importance of Organisational Culture in the pursuit of Excellence. An Enabling Environment, with appropriate values is what organisations were encouraged to pay attention to. Earlier, Edgar Schein had written a seminal book entitled *Leadership and Organisational Culture,* which contributed greatly to an appreciation of culture in developing strong organisations.

4. In the early 1990s, the accent was on the quality of Leadership. Earlier works on Leadership emphasised the two dimensions of Task and People relationships. They did not satisfactorily explain why organisations which performed their tasks efficiently were productive and treated people with dignity and respect, nevertheless did not 'turn' people on, or excite them in any meaningful way. Attention turned to identifying organisational leaders who could develop organisations with missions and visions that people would want to associate themselves with. Organisational excitement was the term used to describe the emotional tone found in such organisations. Writings and teachings on the crucial contribution to organisational success of Transformational & Charismatic Leadership behaviours emerged, by such authors as James McGregor Burns, W. Bennis, Bernard Bass, and others.

5. Along the way and over a stretched period of time, there was considerable interest in such issues as 'How to get people to do what you want them to do or what they should be doing'. Writings on Motivation, Interpersonal Skills, and Emotional Intelligence come under this category, including the following:
    - Maslow's Hierarchy of Human Needs Theory
    - McGregor's Theory X/Y assumptions of workplace supervisors
    - Mayo's emphasis on the workplace meeting social needs became part of the Human Relations movement
    - McClelland's Primary Social Motives
    - Herzberg's Hygiene-Motivation Factor Theory
    - Lawler and Porter's Motivation Theory
    - Daniel Goleman's Emotional Intelligence

6. In 1990, the author embarked on a managerial study project around the research question: What do Singapore-based managers actually do which contribute to good organisational performance? The study collected data from a purposive sample of 770 managers and used factor analysis to derive 10 Management Work Factors. A second level factor analytic solution yielded the following 5 Megafactors of Management Work:

1) *Organisational Empowerment*

This factor emerged to be the strongest determinant of good performance. It identified the management work managers did to create an organisational climate within which people were encouraged to take initiative to be innovative and creative to develop new and better ways of doing things. It also included the empowerment of people through delegation and other measures so that they could act and correct their own mistakes.

2) *Quality Management*

Here, the managers' work focused on determining the results people were expected to achieve, guided by quality and productivity concerns. Reports and feedback, in a cybernetic loop, provided the necessary information to help benchmark desired results.

3) *Goal Achievement Management*

This was the work of establishing understood and accepted objectives, and developing skills to equip people with the competences needed to achieve results.

4) *Information Network and Analysis*

This was the work managers did to scan the environment and build forecasts to frame the needs the organisation was committed to satisfy. Networking with outside stakeholders provided important and essential sources of information gathering.

5) *Performance Work Management*

This was the work of establishing policies and procedures to define performance standards and acceptable ways of doing work. Central were the managerial competences needed since, at the time of commencement of the study, the focus was on what is now seen as the efficiency-effectiveness aspects of organisational management. However, captured in the data and analysis were indications of the importance of management work contributing to good organisational performance through organisational climate building activities.

The findings of this study led to the conclusion that good organisational performance is predicated upon the creation of a positive organisational climate within which managers are committed and motivated to acquire and use an identified set of managerial competences to produce good performance. They affirm the Law of Performance which drives all modern organisations, whether operated as commercial set-ups, governmental agencies, social enterprises or not-for-profit units. Competence is broadly defined as behaviour that leads to good performance, and is generally seen as

comprising Knowledge, Attitudes, Skills, and Habits brought together in the exercise of leadership roles.

Not captured in the study were aspects dealing with the work of mission and vision creation associated with top leadership, an omission seen as needing inclusion in a more comprehensive organisational model.

SINGAPORE MANAGEMENT WORK MEGAFACTORS
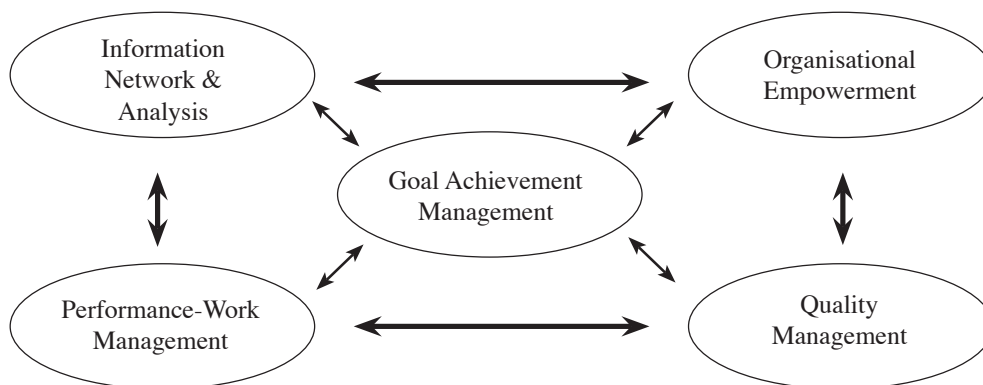
(Source: Created by Author for this study)

Developing A Systemic Framework

Following the completion of the research project, the author had the opportunity to explore further the implications of the findings of this Singapore study on Management Work. His co-founding and chairmanship of his own private education organisation created experiential information for reflection on what it took to create organisational excellence. A re-look at the original findings and a fresh re-ordering of the information led the author to conclude that management work can be generically re-categorised under four core generic headings.

1. Identify stakeholder Needs through environmental scanning and establishing forecasts. This was done largely through Information Network and Analysis activities. The process must, of necessity, factor in the mega-forces of change which include:
    a) Globalisation, with its creation of the paradox of a global village and the con-commitment business strategic imperative to think global, and act local.
    b) Green Biotechnology, resulting from the confluence of environmentalism and genetic engineering, the conflicting attempt simultaneously to maintain ecological balance and the genetic restructuring of nature.
    c) Postmodernism, the philosophical and cultural impulse towards creative destruction of all that is not socially adapted to reconstruct a new order or at least new ways of understanding and doing things.
    d) Infobahn, the information superhighway, opening up an avalanche of information overload that, at the same time, can open up vistas of a brave new world.

2. Articulate the Results to be achieved to satisfy the Needs identified for which the organisation was established. Results are linked to measures of quality, which form the basis for Organisational Goal Achievement. This is where the Lyotardian Law of Performativity kicks in, where a theory, concept, or model is judged on the basis of whether it works, produces results, and achieves a humanly desired goal. For this reason, Key Performance Indicators are the norm in business and management, couched in quantitative or at least, measurable terms.

3. Identify the Work, both managerial and professional/technical, to be done to achieve these results. In the business context, work is managerial if it is accomplished with and through others to make things happen according to the Law of Performativity. Otherwise, it is technical when applied directly to produce results, work that is often physical and less intellectually demanding. This forms the basis for a Performance-Work linkage management system.

4. Develop the Competences needed to accomplish Results, based on an assessment of the range of Competences present and needed by staff. Competence development must ultimately lead to and focus on the identification, attraction, recruitment, motivation, and retention of talent, the source of all wealth creation, whether by way of innovation or by increased efficiency.

Where do all these findings lead us to? How do they relate to the real world of organisations and management? What constitutes Organisational Excellence in practice?

In implementing the framework, two issues have to be addressed:
    1) the need to link organisational needs with results, work, and competence;
    2) the value of developing a holistic model that incorporates the organisational dimensions of efficiency, effectiveness, and enabling environment.

Informed by these findings, the author set out to bring together the different strands of management studies and practices to create a holistic model which will aid comprehension of the complexity of managing organisations towards excellence. As it turned out, the model that emerged was built around the dimensions of Efficiency, Effectiveness, and Enabling conditions.

1. Leadership is about Effectiveness, doing the Right Things, often with transformational impacts.

2. Management is about Efficiency, doing Things Right. To achieve Organisational Excellence, we need management leaders who can do the right things right, and keep doing them over a long period of time consistently, hence, the necessity of

a supportive organisational environment.

3. A Strong Organisational Culture, which will provide the environment and the Enabling conditions to attract, retain, and empower talent, and keep them motivated, committed, and challenged.

Successful design and implementation would lead to the creation of a fully functioning and effective organisation capable of a dynamic balancing among conflicting concerns, challenges and paradoxical demands:
- external versus internal focus
- stability versus flexibility
- differentiation versus integration
- transformation versus stasis
- extrinsic versus intrinsic
- profit-orientation versus corporate social responsibility
- means (process) versus ends (goals)
- individual empowerment versus co-operative (group) relationships.

Addressing and confronting these issues become an ongoing challenge which all leaders, at the higher echelons must constantly grapple with and seek to resolve.

Informed by these concepts and experiential intuitions, and backed by the analysed collected data, the author was led to the creation of a model of organisational excellence. The discussion that follows explicates the outcomes of this intellectual exercise.

Towards Organisational Excellence

A holistic framework of Organisational Management then can be built around the following:
1) The Principle of Needs, Results, Work and Competence
2) Concept of Organisational Excellence

1. The Principle of Needs, Results, Work and Competence

The author's research on management work in Singapore suggested that any framework of good performance in organisations must address organisational needs, work, results, and competence, in a more or less closed-loop fashion. This important management principle can arguably be considered to be the *raison d'etre* or the sole justification for an organisation's continued existence, i.e., the satisfaction of unmet or unsatisfied human needs. These needs will be met when certain results are achieved, usually expressed in objectives established for the organisation (often summarised in the vision and mission statement). Only when desired results with their associated standards of performance have been ascertained can the organisational work and

tasks to achieve these results be meaningfully identified. Effective work that produces results can only be performed by people who must be equipped with the requisite competencies.

A comprehensive framework of organisations must include structures and processes to identify Needs, Results, Work and Competences in a linked cause and effect relationship. The task of building organisational excellence must direct focus on work that leads to the identification of needs, work that establishes measurable desired results, work that categorises the work that needs to be done, and work involving the building up of the core competences needed to perform the work to the desired levels.
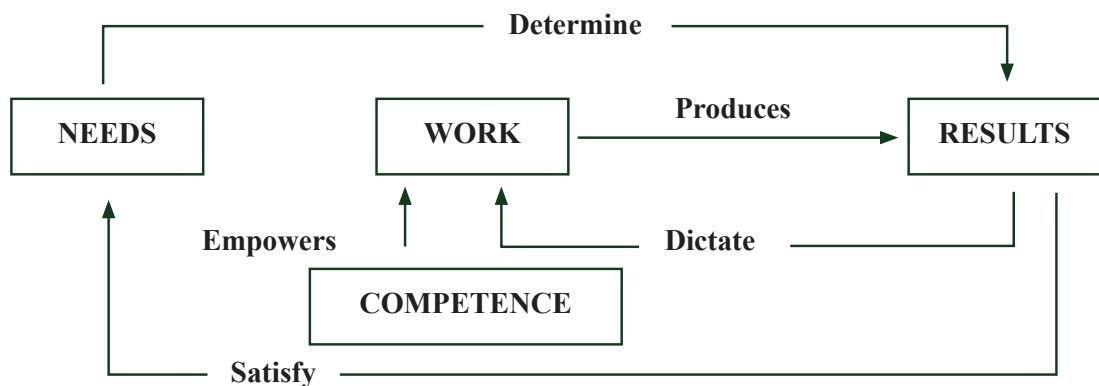
(Source: Created by Author for this study)

2. Concept of Organisational Excellence

An Excellent Organisation, by definition, is one that has successfully worked out its integrated portfolio of Needs, Results, Work and Competence.

First, it has identified the Needs of its three main Stakeholders: Customers, Employees and Shareholders. Obviously, compromise and negotiated agreements must be achieved to produce shared ownership of needs.

Next, it has translated these Needs into Objectives or Results to be achieved that will satisfy these Needs. This defines the Effectiveness dimension of organisational existence.

As its third step, the organisation has articulated the Work that has to be done to achieve these Results. This Work covers three areas, based on the analysis and integration of existing research and studies on organisational management:

- Someone or a group provides Visionary Leadership.
- There is a group of Committed and Competent Management Leaders equipped with the necessary competences.
- The organisation's management spends much time and energy to build a Strong Organisational Culture.

Finally, the organisation has to put in place a system of identifying and developing core Competences needed to carry out the work needed, including leadership succession development plans.

a) Visionary Leadership

Visionary leaders make three vital creative contributions to organisational excellence. They lead by:
- Creating an exciting vision;
- Creating value-added opportunities;
- Creating empowered individuals.

Visionary leaders are not just charismatic personalities. Charismatic leaders are often larger than life characters who bring 'presence' and organisational hype, but not necessary substance to the organisation. Visionary leaders on the other hand, have the capacity, commitment, and competence to generate and articulate shared vision that in turn creates organisation-wide excitement, understanding, and acceptance. They are able to put together conditions, events, projects, products and services which provide opportunities for others to participate in work that translates vision into reality, and ideas and concepts into concrete results. They are able to empower others through the process of delegation, decentralisation, and competence development. In the language of Jerry Porras & Jim Collins in the book, *Built To Last*, the difference is between time-telling and clock-building.

b) Committed and Competent Management Leaders

They constitute the linking pins between top leadership and employees, between plans and implementation, between results and work.

The ability to attract and retain competent managerial personnel who are committed to organisational excellence remains one of the biggest challenges facing top management. They must be equipped with requisite competences (KASH, to symbolise Knowledge, Attitudes, Skills, Habits) that will help them to cope with the efficiency and effectiveness dimensions of organisational life. The need of most organisations is not just managers or just leaders, but management leaders that rare breed of results-oriented personnel who can manage resources and lead people that will support the vision of top leadership in achieving the organisation's mission.
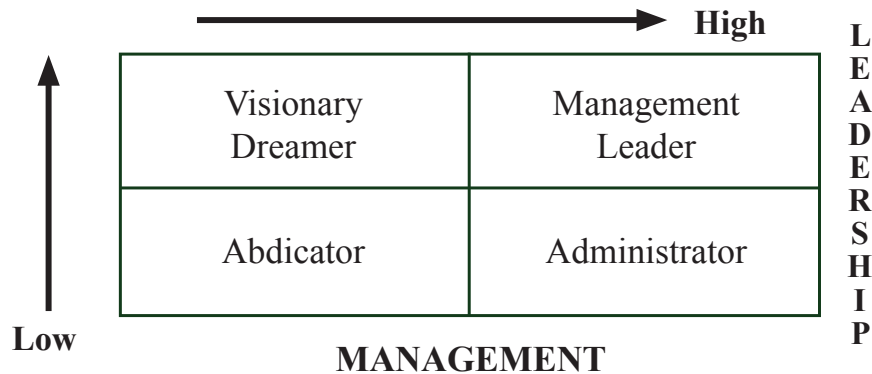
The core competences such management leaders possess include:
- Managing Concepts/Ideas – Planning
- Managing Resources – Organising
- Managing People/Talent – Leading
- Managing Integration of Work and Results – Controlling

In modern business terminology, these are often, wrongly described as Transactional leadership competences. More appropriately, they are better designated

as management leadership competences.

Equipping management with such a portfolio of competences is an important responsibility of top management and calls for systematic and sustained human resource developmental efforts. It requires incumbents to be *au fait* with both the understanding and application of the science of management, and the art of leadership.

	Low ← → High	
High	Visionary Dreamer	Management Leader
	Abdicator	Administrator

MANAGEMENT → (Low to High), **LEADERSHIP** ↑ (High)

(Source: Created by Author for this study)

c) Strong Organisational Culture

Excellence is not a flash in the pan, here today, gone tomorrow. What distinguishes the really excellent organisations from the rest of the pack is their ability to stay competitive and in leadership positions in their industry for a long while. A strong organisational culture makes this possible, providing it stability, and at the same time, providing it with enough flexibility and dynamism to ensure continuing organisational relevance and effectiveness. An organisation's culture is strong if there is fit between its shared mission and values and the strategies it adopts to achieve them. This fit is achieved through the following processes, as per Prof Edgar Schein:

- External Adaptation
- Internal Integration
- Anxiety Reduction

External Adaptation

There is a close relationship between an organisation and its environment such that external changes have impacts on the needs, results, and work of the organisation. An essential function of dynamic organisations is External Adaptation, necessitating continuous monitoring of environmental changes, and using the feedback and information processing to maintain or transform the organisation in an unending attempt to remain relevant and effective. External Adaptation enables an organisation to compete and survive in the face of potentially destabilising changes. It requires the organisation to go beyond the single-loop learning of negative feedback and information processing (the cybernetic principle), to embrace double-loop learning mechanisms of receiving all relevant information from the external environment,

processing it, and using it to respond quickly to environmental changes that impact the organisation's missions, vision, strategies, and values. This double-loop learning ability helps the organisation to transform itself, as opposed to the first order level, single-loop learning that merely promotes maintenance (status quo) of current performance levels. According to Prof Edgar Schein, organisations build into their strategic planning system the following components to anticipate and respond to environmental changes. Organisations typically engage in the following activities as part of the process of external adaptation:

External Adaptation Mechanisms In Organisations

Coping Elements	Management System Components
a) Mission & Strategy	Setting Strategic Direction (& Policies)
b) Goals	Establishing Key & Critical Objectives
c) Means	Organisational Structure & Empowering People
d) Measurement	Establishing Planning
e) Correction	& Controlling System

(Adapted from E.Schein: Organisational Culture and Leadership, 2004)

Organisations with effective external adaptation coping mechanisms have mastered the art of double-loop learning. They possess the capacity to sense and respond to environmental changes with transformational impacts. In short, external adaptation facilitates the management of change.

Internal Integration

An organisation's ability to adapt to external changes must be reinforced by its capacity to integrate its internal structures, systems, and processes guided by the principle of fit between Structure and Strategy. Often, the feedback and information processing signal the need for internal structural systems, and processual changes. Organisations which achieve this have acquired deutero-learning competence. This is a second order level of learning and helps the organisation to manage the interface between the organisation's external environment and its internal structures, systems and processes. This is typically carried out in the establishment of the following elements of organisational bonding activities, again as per Edgar Schein.

Internal Integration Mechanisms In Organisations

Coping Elements	Management System Components
a) Common language	Common Vocabulary
b) Inclusion Criteria	Delegation (Accountability, Authority, Responsibility)
c) Stratification	Organisation Structure
d) Peer Relationships	Teambuilding
e) Rewards Allocation	Performance Appraisal System
f) Ideology	Policies & Procedures

(Adapted from E.Schein: Organisational Culture and Leadership, 2004)

Internal integration is essential to create the stability needed for organisations to achieve progress towards goal achievement.

Anxiety Reduction

People in organisations need to be assured of a sense of inclusion and belonging. These individual human needs go beyond the extrinsic factors of economic survival and security. Employees want to regard themselves as part of the organisation they work for. They want to be able to experience a sense of achievement by contributing to the organisation's objectives. They value the ownership of the projects and tasks assigned to them. Shared values, which they contribute towards the adoption of, help reduce their anxiety in organisational membership. This is why both the outcome and the process of an organisation's value clarification exercise mean a lot to its members in generating a genuine and sincere inclusionary relationship as opposed to an adversarial one. In particular, sincere attempts are made to satisfy higher order individual needs of status, sense of achievement, growth and responsibility, and self-esteem.

Anxiety reduction is about the philosophical pragmatist's on-going quest for human solidarity. Thus, a more complete understanding of the concept of organisational excellence can come about through the synthesis and integration of Needs, Results, Work, and Competence. This is fleshed out in holistic fashion in a manner captured in Figure 1.

For practitioners, this framework constitutes a useful and usable template for assessment and design of organisations related to good performance. It provides a way of evaluating existing organisational structures and functioning and point the way ahead for transformational management work to be identified and acted upon in the pursuit of excellence.

Figure 1

CREATING ORGANISATIONAL EXCELLENCE

GLOBALISATION
(Global Village)

GREEN
BIOTECHNOLOGY
(Environmentalism vs
Genes Engineering)

NEEDS
↓
RESULTS
↓
WORK
↓
COMPETENCE

Anxiety
Reduction

Strong
Organisational
Culture

Employee
Satisfaction

Organisational
Objectives

Internal
Integration

External
Adaptation

Manage
People

ORGANISATIONAL
EXCELLENCE

Create
Empowered
Individuals

Committed,
Competent
Management
Leaders

Visionary
Leadership

Manage
Resources

Manage
Ideas
Work &
Results

Create
Value-added
Opportunities

Create
Exciting
Vision

Customer Delight

POSTMODERNISM
(Creative Destruction
& Social Construction)

INFOBAHN
(Democratic Protocol)

(Source: Created by Author for this study)

Summary

Moving an organisation towards excellence improves tremendously its competitiveness in an ever-changing marketplace. It requires discipline and commitment. It involves the management of innovation and change, and a systematic approach to assess and design excellence into an enterprise. This presupposes a clear understanding of an organisation's Concept of Excellence, and its acceptance as a basis for integrating and synergising essential processes into an overall scheme of things that balances on the one hand, the nexus among the key variables of Needs, Results, Work, and Competences, and on the other hand, the practicalities of translating ideas and concepts into achieved outcomes.

Using this framework, the author has developed a management leadership system in two organisations he worked for; integrating Enterprise Planning, Position Planning, and Competency Development, to dynamically balance conflicting social, organisational, and personnel demands in such a way that facilitates sustainable adaptation, growth and success. Figure 2 outlines, without discussion, how such a process might work out.

ORGANISATIONAL EXCELLENCE THROUGH MANAGEMENT LEADERSHIP SYSTEM

ANALYSES

FUTURE CONDITIONS & EVENTS

NEEDS & OPPORTUNITIES

FORECAST

PEST
INDUSTRY
COMPETITOR
BENCHMARK
SWOT

Needs, Results, Work, Competence

CONCEPT OF ORGANISATIONAL EXCELLENCE

COMPETENCY DEVELOPMENT

POSITION PLANS

ENTERPRISE PLAN

JOB COMPETENCY REQUIREMENTS

CEO'S ACCOUNTABILITY CHARTER

MISSION

SUPER-ORDINATE GOAL

PERSONAL COMPETENCY PROFILE

KEY MISSION STATEMENT & KEY MISSION STANDARDS

SHARED VALUES

KEY WORK AREAS MANAGEMENT TECHNICAL

STRATEGY

COMPETENCY GAP ANALYSIS

KEY WORK STANDARDS

COMPETENCY DEVELOPMENT PLAN

STRUCTURE

SYSTEMS

STAFF & SKILLS

CASCADE TO SUBORDINATES

ACTION PLANS

MAINTAIN NEEDS
IMPROVE NEEDS
OPPORTUNITY NEEDS

OUTCOMES

(Source: Created by Author for this study)

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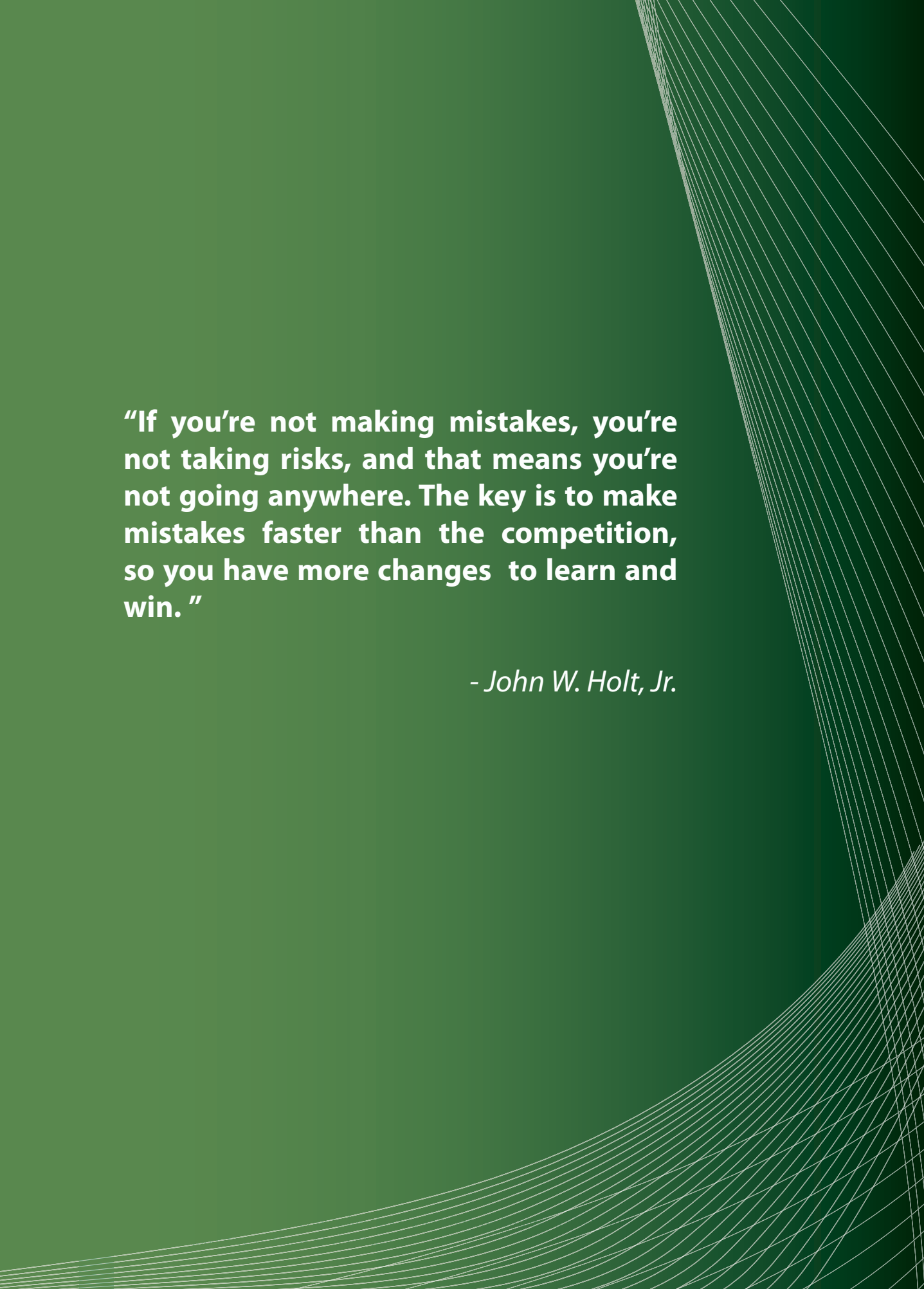
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"If you're not making mistakes, you're not taking risks, and that means you're not going anywhere. The key is to make mistakes faster than the competition, so you have more changes to learn and win. "

- John W. Holt, Jr.

Adapting Porter's Strategy Formulation Process and Generic Strategies Model in Today's Competitive Business Environment

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Abstract

The purpose of this twelve months study is to examine Porter's Strategy Formulation Process (SFP) and test its applicability in today's competitive business environment. His work on formulating strategy looked at what the business is currently doing, followed by happenings in the environment and finally what the business should be doing in response to the earlier findings (Porter, 2004).

Several recommendations result from applying and testing these academic concepts on both SFP and methodologies. Questions on the practicality of these concepts and whether managers can cope with these demands whilst managing day to day business stresses are raised and addressed. Insights gained are used to refine processes and methodologies.

The recommendations include an additional step at the beginning of the three-step SFP. This explicit step, "framing management questions" helps the user to improve framing business issues and challenges before investing months of effort and resources to develop business strategies. Tools like SWOT, Porter's industry analysis and PESTEL framework for scanning the macro-environment are packaged in an integrated framework (Integrated Situation Assessment Framework - ISAF) to facilitate business situation assessment. Porter's generic strategy model used for exploring possible strategies is once again tested and enhanced for today's dynamic fast-changing competitive environment.

Keywords: Strategy Formulation Process, Situation Assessment, Porter's Generic Strategy Model, SWOT, Leadership

Introduction

Changing consumer behaviours and the "instant gratification" culture are drivers challenging today's business models. Businesses are increasingly impacted by technology advancement like innovation, automation, and Internet. Easier and more accessible travel is transforming business ecosystems to become more global as described in concepts like borderless world (Ohmae, 2000). Given continuous rapid change, researchers now promote designing agile organisations which are built to change versus organisations which are built to last. This is the new reality of the business world.

Managers are straining to enhance their skills to cope with this new reality. They need to better understand the market place and align their strategies to address fast changing market demands, and achieve intended business ambitions. The question is, "Do they know how to enhance, adapt or develop business strategies?".

Mintzberg's book, *Rise and Fall of Strategic Planning,* commented that "managers analyse and plan like mad; they just don't strategise". The process of strategy formulation requires a structured systematic approach. It is not just about analysis but strategising a set of options towards achieving stated business objectives (Mintzberg, 2005). Many theoretical frameworks that deal with strategy have been developed but up to now, there has been no description of how one can put strategy in practice. (Wiebes, Baaij, Keibek, and Witteveen, 2007).

This resonates with what I have seen where senior executives struggle with strategies development whenever there is a need to re-examine strategic directions. Some call on consultants to assist. Anecdotally, most managers, having attended the school of hard rocks, respond to business challenges intuitively through trial and error. Whilst most of them are comfortable in assessing internal organisational weaknesses and strengths through tools like SWOT analysis (Strengths-Weaknesses-Opportunities-Threats), most are uncomfortable in conducting assessments on external competitive marketplace using methodologies like industry analysis and macro-economic scans in strategy development assignments.

Drucker defines strategic planning as the continuous process of making risk taking decisions systematically with the greatest knowledge of their futurity; organising systematically the efforts needed to carry out these decisions; and measuring the results of these decisions against the expectations through organised, systematic feedback. This process calls for a structured and analytical approach (Drucker, 2008).

The purpose of this twelve months study is to examine Porter's Strategy Formulation Process and his generic strategies model and test its applicability in today's competitive business environment. Each of these steps applies Porter's techniques and methodologies to formulate a set of business strategies in a live business environment.

Academic Literature on Strategy Formulation Process (SFP) and Generic Strategic Models

Michael Porter's work on competitive strategy and its core disciplines of industry, competitor analysis and strategic positioning are now an accepted part of management practice (2004). Different aspects of his framework have been used when reviewing and developing business or functional strategies.

The questions in this study include:

1. Is there an approach to strategy formulation?
2. Are there appropriate strategy models to be used as a starting point when developing business strategies?

This study deals with both questions. For the first question, Porter's work on SFP examines what the business is currently doing, followed by happenings in the environment and finally, what the business should be doing in response to the earlier findings (Porter, 2004). This is similar to other three step approaches in strategy formulation which espouse similar themes of:

• Perform situation baseline analysis
• Set the objectives and explore strategic options
• Recommend the strategies

For the second question, Porter's generic strategy model is used as a starting point to explore strategic options. The study examines if the model is sufficient to address today's professional services businesses.

Perform Situational Analysis or Baseline Assessment

Establishing a current business position relative to its competitive industry landscape is performing a situational analysis. It looks at both internal and external competitive capabilities, trends and success drivers for the relevant business so that appropriate strategies (responses) can be developed to either capitalise on its successes or to address its weaknesses. There are many established techniques for situation analysis ranging from Humphrey's SWOT (Strengths-Weaknesses-Opportunities-Threats) analysis to more complex methodologies like Porter's Five Forces of Industry Competitors, Buyers, Suppliers, Substitutes, and Potential Entrants.

In this study, other analysis framework like PEST (Political, Environmental, Social and Technological) which examines macro-economic factors for environmental scanning is used. There are variants of this framework which include PESTEL (Political, Economic, Social, Technological, Ethical, Legal) or SLEPT (Social, Legal, Economic, Political, Technological) which incorporates regulatory and legal dimensions (Note 2).

Objectives Setting and Exploring Strategic Options

Objective setting is the task of Leaders. "Leadership" has a Germanic origin meaning to "find a new path" (Hesselbein and Goldsmith, 2009). This is expressed commonly known in business language as vision and mission.

Porter's work on three Generic Strategies of differentiation, cost leadership and focus is often used for strategies formulation. Since then, a fourth generic strategy called "system lock-in" in which companies attract complements, firms that deliver products and service offerings to its standards is introduced (Hax and Wilde, 2001). Microsoft is a successful example of system lock-in strategy though many other companies like Intel, Visa and e-Bay have enjoyed competitive advantage from organisations accepting their standards.

Innovative companies are searching for strategies to break value-cost tradeoffs and entry into uncontested market spaces (blue oceans) rather than competing in red oceans where value-cost tradeoffs are routine and their market places are characteristically crowded. (Kim and Mauborgue, 2005). Cost competition and beating low cost rival is intensifying by the day. Ryan investigates this growing challenge and proposes companies' need to study how low cost rivals survive to 'outbeat' them in the next round (Ryans, 2009).

According to Sutherland and Canwell, organisations pursuing growth strategies have choices of either pursuing growth in existing industries or undertaking diversification in other industries (2004). Services organisations, such as professional services, that seek to excel, tend to pursue skills standardisation as a core organisation competency (Sutherland and Canwell, 2004). Singapore Airlines which can still command premium price in a very competitive industry is an example. It has differentiated itself through excellent service and delivery quality proficiency.

This study uses Porter's Generic Strategies Model as a base to develop a set of business strategies for a SBU in a professional services organisation.

Recommend the Plan

The last step in SFP is to obtain buy-in and approval of the proposed strategies. Marketing the strategies to stakeholders' community is as important as its development. Stakeholders are keen to know how recommended strategies can address competitive pressures and achieve sustainability, profit, and eminence. This final step involves business case development which is then marketed to the organisation for buy-in and approval before proceeding to the implementation phase.

The business case and roadmap include components of recommended strategies, resources, articulation of risks, and their mitigation to ensure that strategies have enough safeguards during implementation.

Learning from applying Porter's Three Step SFP and Generic Strategies Model

A limitation observed from using this three step process assumes an implicit understanding of the business questions to be addressed. Establishing accurate stakeholders' views of the business issues is quite difficult. It requires considerable effort and skills. The recommendation is to make this step explicit at the beginning of SFP, to be called "Framing the Management Questions".

A Revised Approach

This revised process incorporates an additional first step of framing the management questions. Within this four step approach, it also proposes four work streams with the first work stream recommending activities, tools, and methodologies to be used in each of the steps.

Induction helps users interpret observations derived through the use of the tools and methodology. The framework also provides some guidance on timing estimates in each step. Actual timing is dependent on availability of resources and complexity of the analysis. Data stream provides recommendations on sources and types of input data for the analysis. The connecting line between the various steps suggests that strategy formulation is an iterative process, and as new or additional insights emerge, the steps may need to be revisited to refine the analyses and recommendations.

The diagram below is a pictorial illustration of the revised Strategy Formulation Process.

Figure 1. Four-Step Strategy Formulation Process, Research, 2011

Management Problem 1. Is business sustainable 2. Intervention Strategies to assist business, achieve sustainability, profitability and growth	Perform Situation Analysis	Set the Objectives & Strategic Options	Recommend the Strategies
Action Research	Conduct SWOT and Industry Analysis Study Industry Structure using Porter's Five Forces PESTEL / SLEPT	Revisit Vision & Mission Observations form Situation Analysis to explore types of Strategic Options - Porter's 3 generic strategies of Cost Leadership, Focus and Differentiation	Revisit Vision & Mission Develop Business Case and Market Use the preceding month's results to fine tune strategies Get Management and Stakeholders' Approval and Buy-in
Induction	Observations Inductive reasoning on issues	Patterns and tentative Hypothesis Broader Generalisations	Porter's Competitive Strategy model refined - Theories
Timeline	Cross Sectional Set for 3 months	Cross Sectional Set for 2-3 months	Cross Sectional Set for 2-3 months
Data Samples	Internal staff Clients & Prospects Alliances & Competitors Secondary research on addressable space	Back up : additional prospects in case further input is needed for strategic options	Validate the strategies with a group of Leaders

Frame the Management Questions – First Step of Four Steps

Just as framing the research question is an important first step in academic research, it is important to frame the management questions at its commencement. Careful observations on symptoms, signs and interview dialogues in the business can be quite insightful and through the process of induction (Note 1), a set of management questions can be accurately established. There are always tell-tale signs. Unusual high staff turnover can be a sign of employees' dissatisfaction of employment conditions, declining revenue, and management infighting are symptoms of both internal and external factors affecting business management effectiveness. An essential task

after framing the management questions is to define and describe key words in the management questions so that everyone has common understanding of the key questions.

Perform Situation Analysis (Step Two)

How knowledgeable are managers about internal strengths and weaknesses, competition and marketplace? Working with managers over the years, including those in this study suggests uneven knowledge at best. A Chinese saying from Sun Zi's Art of War, "Know yourself, know your enemy; hundred battles, hundred won (zhi ji zhi bi, bai zhan bai sheng)" encourages managers to know one's own capability and that of the enemy (Wee, 2005). Tools used in situation analysis can range from simple SWOT methodology to a comprehensive competitive industry and organisation's competitive landscape position.

Both SWOT and Porter's Five Forces industry analysis are applied in this study. SWOT technique developed by Albert Humphrey in the 1960s to improve business performance is commonly used by managers to identify internal factors for improvement. Easier to execute, SWOT is recommended in "The New Leader's 100-day Action Plan" as part of the Situation Assessment (Bradt, Check, and Pedraza, 2009).

Porter's work on Five Forces structural industry analysis, on the other hand, is more comprehensive. It is still regarded as an appropriate methodology having weathered the test of time. The main inhibition towards using this technique is the difficulty of the task itself. Confidential information about competitors is not easily available. Hence, availability, accessibility, and market data quality for the analysis can be from poor to credible. Developed markets do have reasonable published data, but most emerging markets do not have such published data due to lack of companies sharing their information. Resources and effort to conduct structural industry analysis is significantly more depending on the degree of comprehensiveness. Market information analysis resort to using proxies to estimate market size and market share information. See Porter's book for full treatment of competitive industry analysis (Porter, 2004).

These frameworks have different focus. A SWOT analysis tends to provide an internal assessment supplemented by some points of view on the external competitors, whereas the Five Forces framework for competitive environment examines the external and internal competitive factors, and put them in context of the entire geographic environment using the PESTEL / STEER framework (Note 2).

This study did confirm the view that most managers including seasoned business professionals are unable to provide insightful competitors' information when performing Porter's Five Forces and PESTEL analyses (Porter, 2008). After a false start, a small team was commissioned to conduct primary and secondary research over four months involving sixty three respondents (seventy percent were external respondents). The resultant industry and macro-economic investigations provided significant insights for the next step of strategic options development.
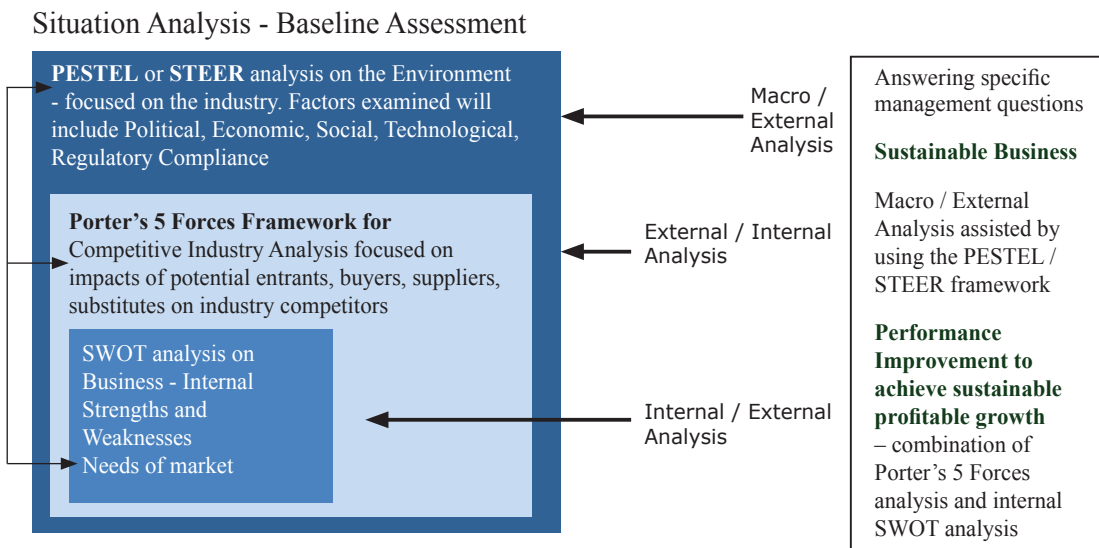
Business pressures and circumstances may end up using a combination of both techniques as in the case of this study. Borrowing a concept practised in medical emergency treatment, one can conduct a quick SWOT on the business as in ABC (A-Airways, B- Breathing, C-Circulation) assessment at a medical triage to assess the criticality of the patient's condition.

Immediate medical procedure can be applied to stabilise the patient before a more thorough investigation to develop a longer term treatment plan. Likewise, immediate fixes or tactics to relief business pressures can be applied.

Integrated Situation Analysis Framework (ISAF)

It is useful to show how SWOT and the more complex frameworks can be integrated in a holistic manner and a user can choose to use all or some of the tools and techniques in this framework depending on the situation, skills, resources and time availability. Called the Integrated Situation Analysis Framework (ISAF), it is aimed at categorising the tools at different levels with its emphasis on either internal or external dimensions.

Figure 2. Integrated Situation Analysis Framework, Researcher, 2011

Situation Analysis - Baseline Assessment

PESTEL or STEER analysis on the Environment - focused on the industry. Factors examined will include Political, Economic, Social, Technological, Regulatory Compliance

Porter's 5 Forces Framework for Competitive Industry Analysis focused on impacts of potential entrants, buyers, suppliers, substitutes on industry competitors

SWOT analysis on Business - Internal Strengths and Weaknesses Needs of market

Macro / External Analysis

External / Internal Analysis

Internal / External Analysis

Answering specific management questions

Sustainable Business

Macro / External Analysis assisted by using the PESTEL / STEER framework

Performance Improvement to achieve sustainable profitable growth – combination of Porter's 5 Forces analysis and internal SWOT analysis

Objectives Setting and Exploring Strategic Options (Step Three)

Objectives setting is articulating the target end state. Much is written about business visions, value and missions. Kaplan, "Strategy Maps", describes Mission as Why We Exist, Values as What's Important To Us, and Vision as What We Want To Be (2004). These three elements in the strategy continuum drive the architecting of the subsequent strategies and performance measurements. These strategies are designed to address gaps in the competitive market derived from the market industry insights, capitalise on SWOT opportunities and consistent with corporate mission and vision.

Studies conducted on Porter's model of generic strategies on simplicity, accuracy, and generalisability using an empirical analysis of PIMS data (Note 3) concluded that his model does capture much of the inherent complexity of strategic gestalts, but performance norms vary significantly across strategic types. Questionable predictive accuracy limits the generalisability of some prescriptions implicit in the model (Miller and Dess, 1993).

Experiences gained from applying Porter's generic strategy model are that resultant strategies are mainly "me-too" and operational improvements in nature. Re-engineering of processes resulting in less costly and higher quality processes are outcomes of cost leadership strategies. Leveraging online and technology to pursue these gains is common thinking as per the studies on on-line business models (Koo, Koh, and Nam, 2004). Differentiation, focus, and their combination do result in some business models extensions on product or services segments.

When it comes to pursuing aggressive growth agenda, one needs to explore value innovation models such as blue ocean concepts which are designed to compete in new uncontested market places, breaking value-cost tradeoffs (Kim and Mauborgue, 2005), and diversification (Sutherland and Canwell, 2004). Aggressiveness of diversification strategies is dependent on organisation competencies and risks appetites of the business management. Most tend to stay within the boundaries of differentiation and focus type strategies unless there is a belief that business model change is critical for business survival.

Innovation is a word that most executives acknowledge as necessary to gain competitive advantage, but the process of inculcating innovation as a capability is quite challenging for most organisations. Thomas Friedman (*The World Is Flat*) challenged President Obama to create more Jobs - Steve Jobs of Apple fame. "Innovation distinguishes between a leader and a follower", quotes Steve. His seven principles of innovation secrets challenge the user to get out of status quo, think differently, and be insanely different (Gallo, 2010). For the few which have achieved the big "I" of innovation, industries have been transformed. The current examples of Apple's i-devices have transformed user behaviours and business models. Most innovation belong to the little "i" category. Challenging adoption of innovation as a discipline does facilitate some outcomes of good ideas.

Balancing between Ongoing Performance and Long-term Business Strategy

The challenge in these assignments is delivering ongoing business performance whilst developing new strategies simultaneously. The continuum of alignment between short term tactics and longer term strategies can be from one extreme to another on the strategy continuum.

The tasks for the leader and its executive management team can therefore range from leveraging and building on short term tactics to managing significant trade-offs if long-term strategies and short-term tactics are not directionally aligned in this continuum. This calls for pragmatism and a practical approach when performing the steps in the SFP.

Recommending the Plan (Step Four)

The actual impact of the developed strategies will be realised when they are implemented. This requires firstly, stakeholders to believe in the plan. With this belief, comes commitment and the willingness to invest resources, effort, and time to relentlessly implement the strategies. Therefore, a key deliverable of this step is a completed business case which underpins the key components of strategies formulation output.

Developing the Business Case

The credibility of the business case is about accuracy and robustness of the logic and arguments presented in the case. This is the objective part of this step. A credible business case must clearly articulate the business context, management questions, current business situation, and corresponding improvement plans which contain proposed strategies and mitigation of identified risks, resource requirements, and implementation timeline. These components are deliverables in each step of SFP. The table below summarises components of the business case and their sources.

Table 1. Business Case Components, Researcher, 2011

Business Case Component	Source from Four-Step Process
Context and Management Questions	Management Questions, Business environment part of Perform Situation Analysis. Step One and Step Two (part)
Current Situation - Business performance, trends, industry, competitiveness, SWOT, Five Forces impacting business	Mainly from Perform Situation Analysis using ISAF (Step Two)
Setting Objectives and Exploring Options	The source of this component comes from Step Three which include defining the short-term and long-term business targets. This is usually expressed as Vision and Mission. The exploring of different strategies and tactics to address the identified issues (Step Two) and their trade-offs are discussed and debated.
Recommending the Plan	Recommendation of Strategic and Rationale Benefits and Costs Schedule Implementation Roadmap Resources Requirements Roadmap Capital Investment Schedule Risks Identification and Mitigation Implementation Roadmap Communication Plan

Marketing the Business Case

The subjective part is to market the business case. Boards and Senior Management want to have confidence that recommendations are well-founded, comprehensive, and robust. Supporting data and facts lends integrity and credibility to the business case. The communication of this business case to the above stakeholder group is upward management.

Equally important is communication and marketing to downward management such as employees and the organisation. They too, must support the case so that they are willing to execute the plan at implementation stage. Depending on the confidentiality, size and complexity of the strategies involved, a well thought through communication plan targeted at different audiences must be properly developed and managed. Sometimes, the strategies may include downsizing or facilitates closure impacting employment. Sensitivity needs to be exercised.

Past experience suggests that managers tend to under focus in this area. This is no longer acceptable with a more knowledgeable educated workforce today. It has a higher proportion of Gen-Y population which demands a culture of greater transparency, participatory decision-making, and better social consciousness environment (Erickson, 2008). Feedback from this group is often used to fine tune proposed implementation tactics once the strategies are agreed and approved.

Most organisations rely on their Human Resources department to assist on this exercise, but such skills are rarely found in these departments, which are more experienced in dealing with industrial relations and operational matters. Such skill

sets include communication targeting, messaging, media, and some understanding of psychological and human behaviours. Leading organisations such as global multinationals are beginning to recruit specialists to assist in organisation behaviour management.

Conclusion

Experience showed that there is a higher tendency to revisit the current situation either to collect more data or change analysis emphasis. This is particularly so in past Strategy Formulation exercises where objectives or management questions are not clearly defined upfront. Hence, enhancing this three-step Strategy Formulation Process with an additional first step to explicitly frame the management questions helps to direct the efforts on the subsequent process steps and increase overall efficiency.

This study provides a real testing ground for combining the proposed ISAF (Integrated Situation Analysis Framework) with the enhanced four-step process. Professionally, the executive team tasked with the responsibility of developing the SBU strategy has successfully delivered its assignment whilst delivering its day to day business. The business grew significantly in the past year whilst delivering a set of aligned business strategies consistent with its five-year vision. The short-term tactics and strategies are aligned, and evidence of sustainable profitable growth is seen. In the process, the team also learnt more about its business and honed its management skills. They get to review and reflect on strategy management academic literature. This is achieved through either reinforcing concepts or addressing limitations whilst applying these processes and methodologies in a live workplace environment. Proposed enhancements to these models include the Four Step Strategy Formulation Process, enhancement of Porter's Generic Strategies Model, and also the introduction of an ISAF when performing business situation assessment (Step Two).

Change Management is crucial in Strategy Formulation dealing with a more nimble and educated workforce in today's knowledge-based marketplace. Hence, it is not enough to focus on developing the business strategy. There is a need also to engage, and market the strategy to stakeholders' community.

Managers who are tasked with similar assignments can use this knowledge of a more structured approach to formulate business strategies, and therefore find the process less daunting. Practice does make the task easier. As managers progress beyond a rudimentary SWOT analysis, and use more robust techniques like ISAF to understand its competitive industry dynamics, the developed business strategies will be more robust.

Returning to Mintzberg who once commented that "managers manage like mad but fail to strategise", perhaps part of the reason is the lack of capability. This study aims to address this concern and provide some support to managers with tools and techniques to develop forward-looking strategies in their crowded and changing competitive marketplace.

Notes

1. Induction is the process of drawing a conclusion in an empirical study by observing and generalising from a set of data, whereas deduction is the process of drawing conclusions from other propositions or from data on the basis of logical reasoning.

2. PESTEL / STEER / SLEPT Frameworks (Oxford University Press, 2009).

   There are many factors in the macro-environment which affect the decisions of the managers of any organisation. Tax changes, new laws, trade barriers, demographic change, and government policy changes are all examples of macro change. To help analyse these factors, managers can categorise them using the PESTEL model. This classification distinguishes between:

   - *Political factors*. These refer to government policy such as the degree of intervention in the economy.
   - *Economic factors*. These include interest rates, taxation changes, economic growth, inflation, and exchange rates.
   - *Social factors*. Changes in social trends can impact on the demand for a firm's products, and the availability and willingness of individuals to work.
   - *Technological factors*. New technologies create new products and new processes.
   - *Environmental factors*. Environmental factors include the weather and climate change.
   - *Legal factors*. These are related to the legal environment in which firms operate.

3. PIMS Project – Profit Impact Marketing Strategies Project conducted by Strategic Planning Institute. This project is a large, ongoing statistical analysis of strategic, environmental, and performance variables for more than 2,000 business units, which represent 200 corporations (Miller and Dess, 1993).

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"Quality in a product or service is not what the supplier puts in. It is what the customer gets out and is willing to pay for. A product is not quality because it is hard to make and costs a lot of money, as manufacturers typically believe. This is incompetence. Customers pay only for what is of use to them and gives them value. Nothing else constitutes quality."

- Peter F. Drucker

Consumers' Perceptions and Receptivity to Service Quality of Low-Cost Carrier Industry in Singapore

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Abstract

The emergence of the Low-Cost Carriers (LCCs) in Asia has geometrically reshaped the competitive environment of the airline industry and given it tremendous momentum by increasing passenger traffic. The ability to differentiate themselves from their competitors through offering plausible service quality will allow LCCs to sustain positional business advantage in today's world of globalisation. Central to this is the need for the LCCs to continuously discern the expectation gap on the services offered and seek to marginalise the gap to meet the exigencies of the customers. This research paper examines consumers' perceived service quality of LCCs in Singapore. It employs the SERVQUAL to assess customers' receptivity towards budget travelling and perceived service quality. The Service Gap Analysis Model was applied to provide granularity to the research investigation. The key finding revealed that the expectations of LCC passengers on service quality were higher than their perceptions. While customers of LCC may be paying a lower airfare as compared to travelling in full-cost carriers, they do not expect a compromise in service quality. LCC managers can use the outcome of this research to gain in-depth understanding of customer perceived quality, and articulate effective marketing strategies to maximise customer's perceived experiential value.

Keywords: Service Quality, Customer Perception, Customer Expectation, Customer Satisfaction, Low-Cost Carriers

Introduction

Background

        The globalisation of the world economy has intensified in recent decades. The service sector has increasingly become a significant part of international business activities in many countries (WTO, 2011). The Low-Cost Carriers (LCCs) business concept is regarded a novelty in modern economies, initiating a new chapter in the commercial aviation market (Damuri and Anus, 2005). Such services target primarily at the value-conscious customers, and endeavours to introduce westernised-base business model which provides no-frill flights on short haul trips. This is essentially a repositioning strategy to align the development of the airline industry with changing consumer expectations that is gearing towards budget travelling.

        LCC strategy must not be premised on the power of advertising, image and outstanding reputation of service. Michelli (2007) noted that while these are critical features in the market arena, the need to constantly offer delighting quality service remains a key success factor for business sustenance. The emerging LCCs in Asia have created a deep impact on the Asian aviation industry. They are providing momentum to the airline industry, increasing passenger traffic, generating revenue, and delivering customer satisfaction. The airline industry in Asia is undergoing changes that could reshape consumer's perception of air travel. Successful businesses can create repeat and loyal customers by providing treasured experiences. In Singapore, the battle of the airlines started much later. In 2004, a limited service airline, Valuair, was launched. Shortly after, Singapore Airlines invested in a new low-cost start-up, Tiger Airways, while Qantas Airways launched its own LCC, Jetstar Asia, based in Singapore. In 2005, Jetstar Asia acquired Valuair. Currently, in addition to these two budget airlines based in Singapore, there are three others operating here, namely Air Asia, Lion Air and Cebu Pacific.

        Zakaria (2011) concluded that good service quality contributes to increased profits while comprehending and meeting customers' expectations are necessary for survival in today's world of globalisation. It is imperative that service companies measure and monitor service quality and satisfaction with a view to influencing the behavioural intentions of their customers (Saha and Theingi, 2009). With the positive 14.7% GDP growth of the Singapore's economy in 2010 (The Straits Times, 2011) and increase in demand for air travel, low-cost airlines in Singapore will be an important centrepiece in the airline industry. An examination of customers perceived service quality in this low-cost airline industry will hence be critical in assessing future growth.

Theoretical Perspectives

Customer perceptions and expectations of service quality are increasingly used to forecast company profitability and prospects for improved market share. The shift from an industrial to a customer-value paradigm (Toelle, 2006) positions service at the core of a company's efforts to improve profitability and its market share. As virtually all organisations compete to some degree on the basis of service, service quality has become significantly critical to achieve a genuine and sustainable competitive advantage (Skogland and Siguaw, 2004). Berry et al. (1994) reiterated that customers assessed service quality by comparing what they want or expect with what they perceive they are getting, and that customers are the sole judges of service quality.

Service Quality

Two approaches have emerged in the definition of service quality. The first approach forms the foundation of most ongoing definitions in the literature and uses the disconfirmation paradigm developed by Oliver (1980). He defined service quality as "the degree and direction of discrepancy between customers' perceptions and expectations". McDonald and Payne (2006) supported this approach, viewing service quality as "the ability of the service organisation to meet or exceed customer expectations". Thus, this approach refers to service quality as the extent to which customers' perceptions of service delivery meet their expectations (Palmer, 2008). The second approach defines service quality as an attitude towards the firm, accumulated by customers from a number of successful and unsuccessful service experiences (Bateson, 1995). Here, service quality is defined as "a global judgement, or attitude, relating to the superiority of the service" (Parasuraman et al., 1988). Grönroos (1984) stated that perceived service quality was dependent on the comparison of expected service with perceived service, and thus, the outcome of a comparative evaluation process. Thus service quality refers to the concept as an attitude or overall judgement resulting from the comparisons between the customer's expectations and perceptions of actual service that has been performed and delivered (Parasuraman et al., 1985, 1988, 1991, 1994; Grönroos, 1984; Coulthard, 2004; Ladhari and Morales, 2008; Blesic, 2011).

Garvin (1984) acknowledged that service quality derives not from customers' objective evaluation but from subjective recognition of service. In other words, service quality comes from customers' subjective decisions (Bitner et al., 1994). The evaluation of the service that customers encountered will eventually determine customers' perceptions on service quality. Headley and Bowen (1997) argued that service quality is the difference between customers' needs and what they certainly perceive as outcomes. Service quality has two forms, which are, functional service quality and technical service quality (Grönroos, 1984). Functional service quality encompasses the interaction between the service provider and the customer while technical service quality relates to what customers usually receive from the service (Sharma and Patterson, 1999). These two elements contribute to the overall service

quality perceptions.

Service Quality and Expectations

The performance of the service can either be under customers' expectations or above expectations (Saha and Theingi, 2009). Atilgan et al. (2008) highlighted that most customers may not receive the level of service they expected before the actual service experience. However, Teas (1993) reported that customers' expectations are representative of their "ideal" service standards, which may also mean that it may be impossible to match up to that "ideal" expectations customers have. Meanwhile, Rust et al. (1999) indicated that it is not necessary to exceed customer expectations, and in fact, meeting expectations should unambiguously result in higher preference. Boshoff (2007) opined that the quality of service performance is difficult to control, given the human nature of service delivery such as the airline industry. As the level of human interaction in the airline services is high, inherently, service standard can be negatively affected by uncontrollable external factors such as customer's mood or service equipment malfunction (Becker, 2000). Unlike tangible products, services have a greater opportunity to fail due to their intangible or experiential nature (Lee and Sparks, 2007). They can give rise to variability in service quality and leads to errors (Lewis and Chambers, 1989).

Service quality contributes significantly towards service differentiation, positioning, and branding (Prayag, 2007). Notable, Asia has witnessed explosive growth in the low-cost airline market from 2000; hence, it is important for airline companies operating in Asia to comprehend its customers' expectations in order to provide the needed service quality despite its low-cost offering. Companies that consistently innovate and search for effective measures to incorporate the best service quality will likely emerge as winners in the long run as they have favourable customer perceptions (Prayag, 2007), leading to customer retention.

Perceived Quality

Perceived quality is defined as "the consumer's judgment about an entity's overall excellence or superiority" (Zeithaml, 1987). It is different from objective quality because it emphasises the subjective responses to the objects from the customers' perspectives (Gavin, 1983). Perceived quality refers to the evaluation and appraisal from the customers by comparing the expectations and the actual perceptions of the performance. This concept of perceived quality is created through the moment of truth experiences (Berry et al., 2002; Schmitt, 1999).

Perceptions of service quality can occur at different levels of an organisation (Bitner and Hubert, 1994). The comparison between the desired service and the perceived service reflects service quality (Snoj and Mumel, 2002). Service expectations consist of customer's predictions on what would likely happen during the service encounter and customer's needs (Oliver, 1981). With all these concepts embedded, service quality can be defined as subjective perception based on the evaluation of

service that customers encountered, particularly on their interactions with the service provider.

SERVQUAL Model

In the service marketing literature, several models of service quality have emerged to conceptualise service quality (Brogowicz et al., 1990; Grönroos, 1984, 1989) and the models of service quality are still in the developing stage (Lin and Tsai, 2011). These models aim to outline the factors affecting service quality, to overcome quality problems, and to provide a framework for improving quality programmes. There are two schools of thought: The Nordic School (Gronroos Model) and The North American School (SERVQUAL Model). The SERVQUAL model (Figure 1) conceptualised service quality as a gap between customer's expectations and the perception of the service providers' behavioural performance.

Figure 1: The SERVQUAL Model
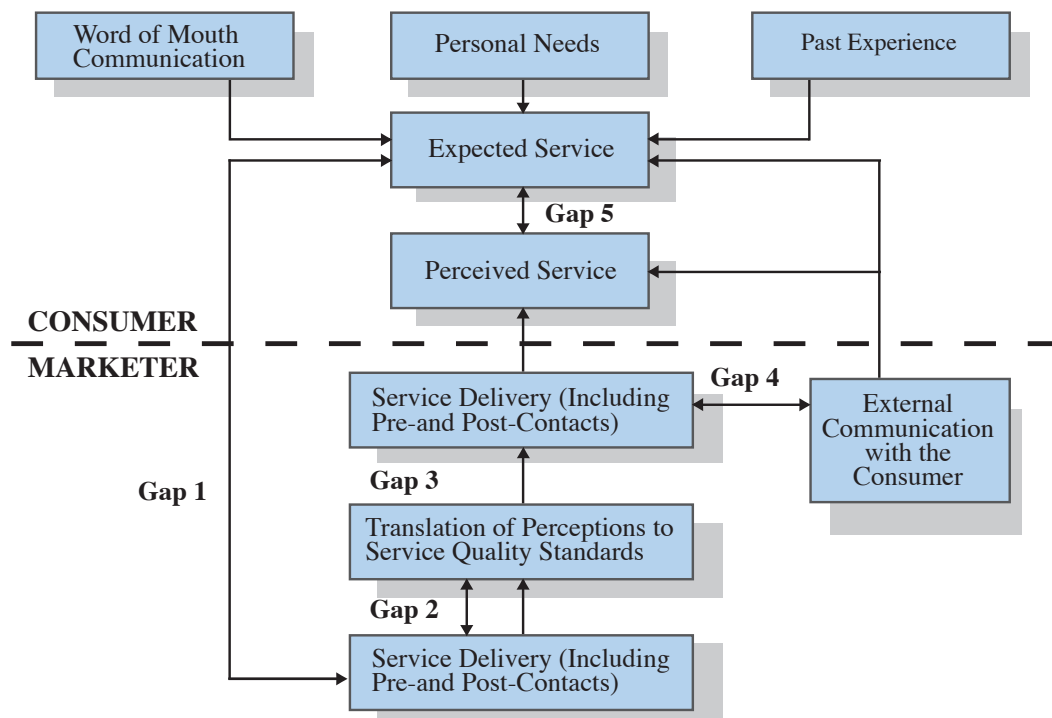
(Source: Adapted from Parasuraman, Zeithaml, and Berry, 1985)

The SERVQUAL model has emerged as a diagnostic instrument for discovering service quality deficiencies. The key idea of the SERVQUAL model is that customer perception of service quality is affected by four gaps or deficiencies which occur on the provider's side. As such, operation managers and marketers need to focus on these critical gaps in order to control gap five which is consumer oriented and the focal point of the model (Zeithaml et al., 1991). It provides the most accepted and most used conceptualisation of what is evaluated in a service encounter, explains service encounter quality, and has been widely adopted by both academics and service firm managers in various countries. The model was derived from the magnitude and direction of five potential service gaps as described in Table 1. Zeithaml et al. (2006) stated that the customers' perceptions of service quality (customer gap) are influenced by four gaps that occur in the service provider side.

Table 1: Dimensions of Service Quality Gaps

Service Gaps	Description
Gap 1 *(Understanding Gap)*	A gap between consumer expectations and management perceptions - This gap refers to the degree to which management in the service organisation doesn't know what its customers expect.
Gap 2 *(Service Standards Gap)*	A gap between management perception and service quality specification - This gap reflects the inability of an organisation to translate managers' perception of customers' expectations into service quality standards.
Gap 3 *(Performance Gap)*	A gap between service quality specifications and service delivery - This gap reflects the inability of the service organisation to deliver the required service standards.
Gap 4 *(Communications Gap)*	A gap between service delivery and external communications - This gap reveals the incompatibility between the employees' performance to deliver services and what the service promises.
Gap 5 *(Service Quality Gap)*	A gap between perceived service and expected service - This gap represents the customers' evaluations of service quality. - This gap is a function of the four provider gaps.

(Source: Created for this research, based on Parasuraman et al., 1985; Zeithaml et al., 1988; 2006)

Parasuraman et al. (1985; 1988) had developed and refined (Parasuraman et al. 1991; 1994a; 1994b) the SERVQUAL scale based on the gap model as an instrument for measuring customers' perceptions of service quality. The original SERVQUAL instrument recognised ten dimensions of service quality (Parasuraman et al. 1985). As a result of the initial qualitative research, these ten dimensions were subsequently merged into five generic dimensions (Parasuraman et al., 1988) as reflected in Table 2. It serves as a meaningful framework for tracking a formal service quality performance and comparison against the performance of competitors over time (Parasuraman 1994a; 1994b).

Table 2: Dimension of Service Quality

Dimensions	Description
Tangibles	The appearance of physical factors such as equipment, personnel, communication materials and physical facilities.
Reliability	*Aircraft, ticketing, baggage area, uniforms* The capability of a promised service to be delivered in a specific manner. *In this context, consumers expect flight to promised destinations to depart and arrive on schedule.*
Responsiveness	The willingness to assist customers and provide prompt service. *Prompt and speedy system for ticketing, in-flight, baggage handling.*
Assurance	The knowledge and courtesy of employees and their ability to convey trust and confidence. *Trusted name, good safety record, competent employees.*
Empathy	The caring, individualised attention of the employees to its customers. *Understanding of special individual needs, anticipates customer needs.*

(Source: Created by Author for this research, based on Parasuraman et al., 1985, 1998)

Nicolini and Salini (2006) noted the usefulness of the SERVQUAL model. It overcomes the challenges in defining the ambiguous nature of service quality by factoring in customer's subjective judgments with reference to their expectations and perceptions along the various dimensions. Consequently, it results in a quantitative instrument that is able to measure service quality indirectly as it provides information on customer's perceived quality through indirect comparison between customer's expectations and perceptions, rather than through the direct customer evaluation process.

Low-Cost Carrier: Service Quality
Grönroos (2000) reported that there are four facets that airline passengers consider most significant in their flying experience: (1) Care and Concern (passengers feel that the airline company, its employees and operational systems are dedicated to solve their problems); (2) Spontaneity (employees demonstrate a willingness and readiness to attend to the passengers' needs); (3) Problem solving (employees possess the knowledge and skill sets to perform their tasks with standards); and (4) Recovery (employees are able to apply initiative to resolve issues experienced by passengers). Separately, the factors that influence passenger's choice of LCCs are the market presence, service quality, frequency flyer membership, fare levels and travel restriction, and schedule convenience provided by each available flight. Clearly, adaptability in response to customer needs, responsiveness, and the flexibility of employee empowerment are essential to deliver high level service (Chebat and Kollias, 2000).

Relationship between Service Quality and Customer's Behavioural Intentions

Several researchers argued that high service quality will affect customer's behavioural intentions and perceptions positively. Namkung and Jang (2007) observed positive linkage among quality, satisfaction and behavioural intention. While several literatures argued that customers are willing to pay more to enjoy better service quality, studies have also noted that the nature and extent of how service quality affects customer's behavioural intentions is still unclear (Zeithaml et al., 1996). According to Ganesh et al. (2000), all the five dimensions of SERVQUAL are significant to consumers' repeat purchase behaviours. However, King (1997) argued that only assurance and empathy are significant to repeat patronage of the consumers.

In summary, the theoretical perspectives that have been articulated and analysed posit that customer perceived quality satisfaction is a key element for success in the LCC industry. Delivering superior service quality and constantly raising employee standards, hence appear to be a prerequisite for success in the LCC industry. In this context, the gaps model can then be applied to examine how existing and new LCC entrants measure up to the LCC market, and to identify new propositions for them to close the gaps in order to deliver optimal service quality and customer satisfaction. This research draws on Parasumaran's et al. (1998) SERVQUAL model in developing its methodology.

Methodology

Research Focus

Limited research attention has been paid towards understanding the drivers of customer perception and service quality in LCCs in Singapore. Specifically, the research sought to examine the factors influencing service quality and customer perception, the extent of perceived service quality and receptivity of customers; and moving forward, to recommend strategies to strengthen service quality in the LCC industry in Singapore.

Research Design

The research adopted a positivist paradigm (Sarantakos, 1988), a deductive approach, and relied on theory testing rather than theory building. Based on the previous discussion, the research employed the explanatory cross-sectional survey design to collect the relevant data for examining the customers perceived service quality of LCCs. This method allowed collection of data in more than one case at a single point in time in order to collect a body of quantitative or quantifiable data in connection with two or more variables, which are then examined to detect patterns of association (Bryman, 2001).

Questionnaire Design

The questions were constructed to be in tandem to the research objectives. Close-ended questions were used to provide a number of alternative answers for the respondent to choose from (Dillman, 2007) and facilitate coding and analysis. The questionnaire was divided into three sections, with each section corresponding to the focus areas that research aimed to measure: importance of dimensions, expectations, and perceptions. Instructions to the survey are phrased in short sentences to enhance respondent clarity, making it as simple to understand as possible. Demographic questions encapsulating age, gender, job mode, education profile and number of airplane trips made were also included in the questionnaire. The 7-point Likert scale (multi-item scale) ranging from (1) "Strongly Disagree" to (7) "Strongly Agree" was adopted to ensure the reliability and validity of the scale's components and findings.

Sample Technique and Size

The Simple Random Sampling method (Cochran 1977) was used for this research. A total of 198 responses were collected over a two-week period. The population comprised young working adults and tertiary students. Out of these responses, 34 respondents had never taken a low-cost airline, leaving a total of 164 respondents who declared having experience flying with the LCC airlines. In the input of the responses into statistics, each item of the survey was assigned an identification code.

Data Collection and Analysis

Primary and secondary data were used to triangulate and achieve higher reliability outcome. The questionnaire was distributed and collected personally by the researcher, using a face-to-face approach. Data analysis included reliability tests, descriptive statistics, t-tests and Pearson correlation test. These tests were performed using the Statistical Package for the Social Sciences (SPSS) version 15.0.

Findings and Discussion

Reliability Analysis

The research adopted the Coefficient Alpha to assess the internal consistency of the scales (Sekaran 2003). The Coefficient Alpha for each dimension of the consumer's expectations was tested and displayed average loadings 0.733 (Table 3), representing "acceptable" reliability as specified by Nunnally and Bernstein (1994). However, the average loadings of the Coefficient Alpha for the dimensions relating to the consumer's perceptions was 0.647 (Table 5), lower than that of the expectations dimension. Based on this pattern, it is possible that the lower alphas for several dimensions were primarily due to a fraction of the respondents indicating "Not Applicable" in their survey responses.

Table 3: Reliability of the Consumer's Expectation and Perception Scales

Item		Coefficient Alpha (α)	
		Expectation	**Perception**
Tangibles		**0.644**	**0.680**
1	Employees of excellent low-cost airlines will be well-groomed and presentable		
2	Employees of excellent low-cost airlines will have good behavioural attitudes		
3	Excellent low-cost airlines will have good physical and in-flight facilities		
4	I will have a comfortable seat and sufficient leg room in excellent low-cost airlines		
Reliability		**0.704**	**0.603**
1	Excellent low-cost airlines will have efficient check-in process and procedures		
2	Excellent low-cost airlines will have timely performance of scheduled flights		
3	Excellent low-cost airlines will have good recovery procedures for delayed or missing baggage		
4	Excellent low-cost airlines will deliver service right the first time		
Responsiveness		**0.766**	**0.673**
1	Excellent low-cost airlines will be capable of responding to emergency situations and contingencies in timely manner		
2	Excellent low-cost airlines will continuously apprise me on all its impending services		
3	Employees of excellent low-cost airlines will respond promptly to my requirements		
4	Excellent low-cost airlines will have a prompt response to all aborted or delayed flights		
Assurance		**0.839**	**0.605**
1	Excellent low-cost airlines will have sincerity and tenacity in solving my problems		
2	An excellent low-cost airline will possess a good safety reputation		
3	Excellent low-cost airlines will equip me with the required knowledge for handling emergency situations and scenarios		
4	Employees of excellent low-cost airlines will be able to inculcate confidence in me		
Empathy		**0.710**	**0.675**
1	Excellent low-cost airlines will have adequate ticketing distribution channels		
2	Excellent low-cost airlines will have convenient flight schedules		
3	Flight attendants of excellent low-cost airlines will make frequent cabin service rounds		
4	Excellent low-cost airlines will have adequate travel related partners such as car rentals, travel insurance, hotels, and restaurants		

(Source: Created by Author for this research)

Descriptive Analyses

The data in Figure 2 reflects the respondents' opinion on the significance of the six dimensions of service quality. The results showed that respondents perceived Tangibles (Employees) and Empathy dimensions as most important. These dimensions displayed a mode of 6. Comparatively, the Tangibles (Employees) dimension displayed a slightly higher mean, with a score of 5. Separately, the other four remaining dimensions were noted to be of lesser importance to the respondents. In the same pattern, the Reliability dimension specifically indicated a mode of 1. The variance noted in the consumer perception on the importance between Tangibles (Physical) and Tangibles (Employees) reiterated that the survey was justified in segregating the two dimensions, given that these dimensions were lucidly distinct in the respondents' minds.

Figure 2: Importance of Service Quality Dimensions (Mean and Mode Scores)
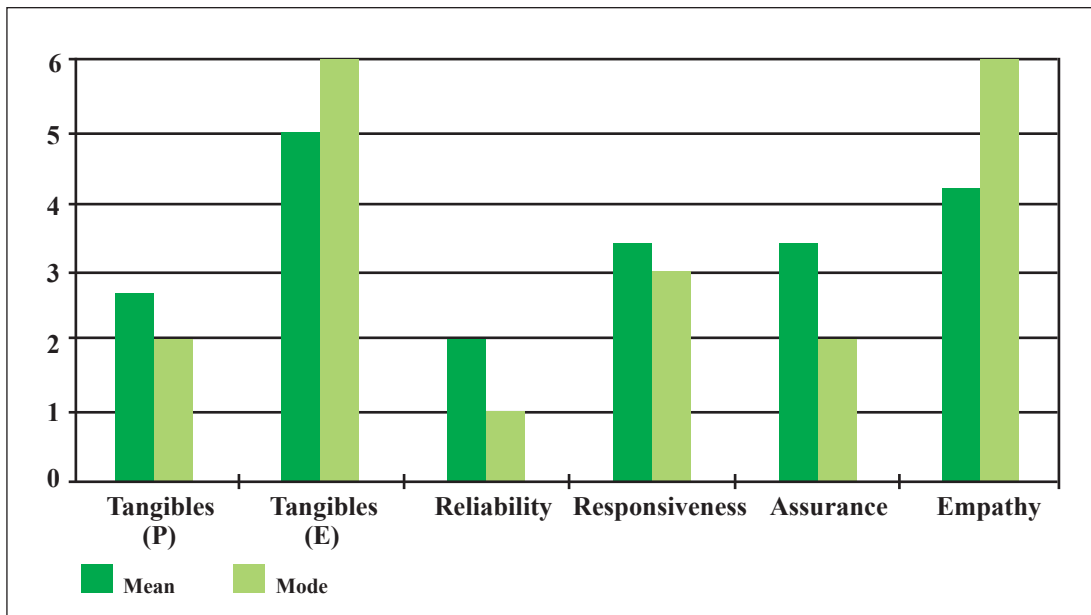
(Source: Created by Author for this research)

As presented in Figure 3, 52% of the respondent considered the dimension for Tangibles (Employees) as "Most Important". As a result of the scores, it may be concluded that well-trained employees are key criteria that customer considered when evaluating the service quality of a LCC airline. This supported the assertion that "extra attention" and "spontaneous exceptional service" can often delight the customer leading to higher satisfaction levels (Bitner et al., 1990).

The results in Figure 4 revealed that 28% of the respondents opined the Empathy dimension as "Most Important". In this context, the Empathy element refers to personalised attention and caring attitude of the airline employees. The overall ordinal ranking of the Empathy dimension derived from this research are consistent with Babbar and Koufteros's (2008) research that the human factor constitutes a major driver when evaluating service excellence.

Figure 3: Importance of Tangibles (Employees) Dimension

Scale of Importance
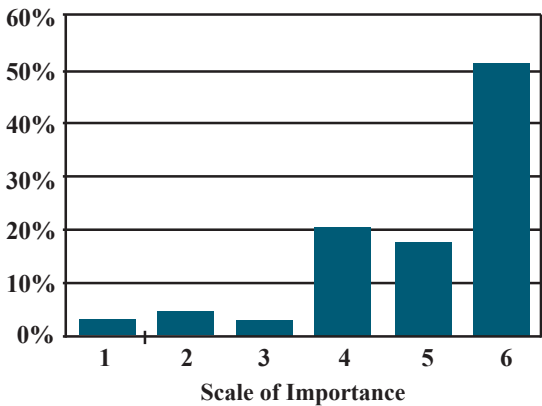
* Higher Scale Reflects Higher Level of Importance

Figure 4: Importance of Empathy Dimension

Scale of Importance
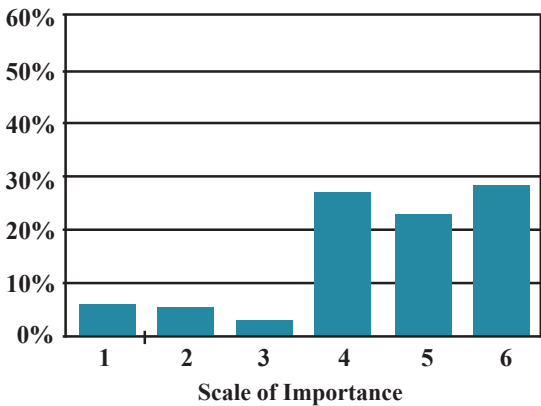
* Higher Scale Reflects Higher Level of Importance

(Source: Created by Author for this research)

Statistical Analyses

Paired Samples T-Test

A paired-sample t-test was performed examining the Expectations and Perceptions of all 6 dimensions of service quality to ascertain the extent of differences in the means between the expectations and the actual perceptions of the service quality for LCC airlines. The results are indicated in Table 4.

Table 4: Paired-samples T-test (on each dimension)

Dimensions/Construct	M	S.D.	t	D.F.	Sig.
Pair 1					
ETANPgrp - PTANPgrp	0.418	1.208	3.934	124	**0.000**
Pair 2					
ETANPgrp - PTANPgrp	0.806	1.445	6.287	124	**0.000**
Pair 3					
ERELIgrp - PRELIgrp	0.748	1.001	8.422	124	**0.000**
Pair 4					
ERESPgrp - PRESPgrp	0.867	1.057	9.216	124	**0.000**
Pair 5					
EASSUgrp - PASSUgrp	0.719	1.011	7.907	124	**0.000**
Pair 6					
EEMPAgrp – PEMPAgrp	0.187	1.027	2.134	124	**0.023**

M: Mean   SD: Standard Deviation   DF: Degree of Freedom   Sig: Significance

(Source: Created by Author for this research)

Based on the data indicated in Table 4, all 6 pairs of dimensions indicated low p value of <0.05. It therefore means that there is a significant difference in the means between the expectations and the actual perceptions of the service quality for low-cost airlines. It further validated the existence of gaps between the customer's expectations and perceptions. A detailed paired-sample test was then performed to further finesse the research. Table 5 reflects the outcome of the 20 detailed paired-samples t-test.

Table 5: Detailed Paired-samples t-tests (on each individual pair)

Dimensions/Construct	Mean	S.D.	t	D.F.	Sig.
Pair 1					
ETANE1 – PTANE 1	0.338	1.256	3.083	124	**0.001**
Pair 2					
ETANE2 – PTANE 2	0.507	1.396	4.041	124	**0.000**
Pair 3					
ETANP1 – PTANP1	0.306	1.440	2.344	124	**0.014**
Pair 4					
ETANP2 – PTANP2	1.306	2.074	7.082	124	**0.000**
Pair 5					
ERELI1 – PRELI1	0.624	1.319	5.346	124	**0.000**
Pair 6					
ERELI2 – PRELI2	0.957	1.431	7.470	122	**0.000**
Pair 7					
ERELI3 – PRELI3	1.278	1.703	7.495	95	**0.000**
Pair 8					
ERELI4 – PRELI4	0.277	1.458	2.181	124	**0.029**
Pair 9					
ERESP1 – PRESP1	1.132	1.425	7.868	96	**0.000**
Pair 10					
ERESP2 – PRESP2	0.375	1.299	3.169	112	**0.001**
Pair 11					
ERESP3 – PRESP3	0.459	1.439	3.577	124	**0.000**
Pair 12					
ERESP4 – PRESP4	1.418	1.626	8.627	96	**0.000**
Pair 13					
EASSU1 – PASSU1	0.971	1.597	6.391	108	**0.000**
Pair 14					
EASSU2 – PASSU2	0.735	1.266	6.546	124	**0.000**
Pair 15					
EASSU3 – PASSU3	0.473	1.590	3.378	122	**0.000**
Pair 16					
EASSU4 – PASSU4	0.687	1.300	5.973	124	**0.000**
Pair 17					
EEMPA1– PEMPA1	0.275	1.623	1.952	124	**0.041**
Pair 18					
EEMPA2 – PEMPA2	0.116	1.782	0.784	124	**0.417**
Dimensions/Construct	**Mean**	**S.D.**	**t**	**D.F.**	**Sig.**
Pair 19					
EEMPA3 – PEMPA3	0.376	1.479	2.902	122	**0.003**
Pair 20					
EEMPA4 – PEMPA4	0.041	1.463	0.367	114	**0.695**

(Source: Created by Author for this research)

Analysis of Service Quality Dimensions

Examining the detailed paired-samples t-test (Table 5), it can be inferred that customer's expectations regarding the Tangibles dimension of service quality have not been achieved. This is particularly evident for TANE2 and TANP2 (Pair 2 and 4), which reflects a low p value of $0.000 (<0.05)$. The overall results indicated that most customers expect low-cost airlines to have employees with good attitudes and adequate leg space in the aircraft. It is imperative that LCC airlines maintain a high quality workforce with high standard physical facilities. As shown in Table 5, the four aspects of the Reliability dimension did not appease the respondents, indicating that customer's expectations were not fulfilled (p value < 0.05). The differences in the means column (RELI2 and RELI3) indicated the enormous differences in means between customer's expectations and perceptions. This showed that customer perceptions can be influenced by poor service encounters such as flight delays and inefficient check-in process as reflected in RELI1 (Pair 5) with a 2-tailed significance of 0.00 (<0.05). The findings highlight the importance for LCC airlines to ensure smooth service delivery with a robust service recovery system.

The Responsiveness dimension indicated an extremely low p value of 0.00 ($p<0.05$) for all four aspects (Pair 9 to 12). It can be seen that the variance in means for RESP1 (Pair 9) and RESP4 (Pair 12) were relatively larger when compared to the other dimensions. RESP1 and RESP4 focuses on customer's perspectives on the airlines' responsiveness to contingency situations and their ability to respond in time when there is a flight delay or cancellation. Overall, the low p values and substantive differences in means indicated that the respondents were not appeased with the responsiveness level that LCC airlines offer. These results indicated that LCC airlines could seek to strengthen its employee's competencies to better manage emergency scenarios. Meanwhile, the results of the paired-samples t-test of the Assurance dimension yielded low p values. Therefore, it showed the significant difference between the expectation and perception scores of this dimension. The low perception scores revealed that there was a need for LCC airlines to instil a greater level of confidence to the respondents. To circumvent this, LCC airlines can focus on enhancing its public relations efforts to elevate customer's confidence.

Finally, the Empathy dimension revealed significant results in the detailed paired-samples t-test. EMPA1 (Pair 17), EMPA2 (Pair 18) and EMPA 4 (Pair 20) indicated high p values of 0.041, 0.417, and 0.695 respectively. The results meant that there was no significant disparity between customer's expectations and perceptions. It indicated that the respondents found the flight schedules offered by the LCCs convenient. EMPA3 (Pair 19) had the lowest p value of 0.003 ($p < 0.05$) in the Empathy dimension. To increase the perception scores of customers and achieve a higher p value, LCC airlines can consider increasing greater customer engagement onboard the aircraft.

Gap Scores and Customer Satisfaction

In this research, the gap score was computed by the difference between the perception score and the expectation score. A positive gap score would mean that the consumer's experience exceeded expectations, resulting in higher satisfaction. The results in Table 6 (Tabulated Gap Scores) reflected negative gap scores against all the items tested, suggesting that consumers' experiences did not meet expectations. A test for correlation between the gap scores and satisfaction levels was also performed. The Pearson correlation test revealed that the variables are correlated at a coefficient 0.317 (correlation significant at the 0.01 level, 2-tailed), suggesting a moderate positive correlation with positive relationship between gap scores and satisfaction levels.

Table 6: Tabulated Gap Scores (Perceptions and Expectations)

Dimensions	Statement	P	E	P-E (Gap)
Tangibles	Well-groomed and presentable employees	4.64	5.09	-0.45
	Employees with good behavioural attitudes	4.83	5.33	-0.50
	Good physical and in-flight facilities	3.65	4.07	-0.42
	Comfortable seat and sufficient leg room	3.07	4.29	-1.22
Reliability	Efficient check-in process and procedures	4.49	5.13	-0.64
	Timely performance of scheduled flights	4.55	5.52	-0.97
	Good recovery procedures for delayed or missing baggage	4.09	5.45	-1.36
	Deliver services right the first time	4.75	5.12	-0.37
Responsiveness	Capable of responding to emergency situations and scenarios in timely manner	4.48	5.81	-1.33
	Prompt advice on all impending services	4.50	5.00	-0.50
	Prompt response to requirements	4.56	5.02	-0.46
	Prompt response to all aborted or delayed flights	4.03	5.49	-1.46
Assurance	Sincerity and tenacity in resolving problems	4.18	4.29	-0.11
	Possess good safety reputation	5.03	5.78	-0.75
	Provides necessary knowledge for handling emergency situations and scenarios	5.05	5.43	-0.38
	Inculcate confidence	4.62	5.32	-0.70
Empathy	Adequate ticketing distribution channels	4.64	5.02	-0.38
	Convenient flight schedules	4.43	4.56	-0.13
	Execute frequent cabin service rounds	4.05	4.45	-0.40
	Possess adequate travel related partners such as car rentals, travel insurance, hotels and restaurants	3.67	3.79	-0.12
Average		4.34	5.02	-0.68
Overall Satisfaction (mean)			4.64	

(Source: Created by Author for this research)

Customer Loyalty and Advocacy

The survey questionnaire was also designed to measure customer loyalty and customer advocacy. 83% of the respondents indicated their willingness to travel with their specified airline again while 73% indicated their willingness to recommend the airline to their colleagues and family. 71% respondents reported that they had travelled more than twice. Taken together, it is logical to conclude that the respondents were well-versed with the service quality and expectations associated with flying LCC airlines. This accounted for the high loyalty and advocacy ratings.

Managerial Implications and Conclusion

Strengthening and Sharpening Employees' Service Quality Standards

The outcomes from this research add new insights and guidelines for airline managers who are seeking to sharpen customer-contact service. Indeed, the low p values noted in four of the five service quality dimensions suggest there is room for improvement in employee's service standards. Lorenzoni and Lewis (2004) suggested placing greater emphasis in selecting the right staff and motivating the employees to increase the internal service quality, which sequentially have an impact on the customers' expectations. Employees should be equipped with the relevant communication and interpersonal skills to effectively interact with the passengers and respond to the varying situations to achieve service excellence. Another area of recommendation is in the area of employee rewards. This has a significant effect on the level of service provided (Parasuraman 1987). Service firms striving to deliver excellent service must ensure that the desired employee behaviours are actively encouraged and appropriately rewarded to motivate employees to provide service excellence and recovery efforts necessary to restore the satisfaction of a disgruntled customer. Appropriately, rewarding employees for the delivery of quality service will help to ensure that the vision of service excellence is implemented (Cone, 1989, 1998).

Marketing Strategies: Pushing the Service and Product Differentiation Boundary

Several experiential marketing strategies focus on service quality and induce customer satisfaction through experiential value. First, the findings of the research revealed that LCC airlines had yet to attain the customer expectations under the five attributes, implying that adequate service recovery is vital to establish and sustain a strong foothold in the airline market. Measures to reduce the gap between customers' expectations and perceptions in order to achieve customer satisfaction could include implementing insurance schemes to insure against flight delays and baggage. Second, LCC airline managers could lever on marketing tools to influence the expectations of customers. Accordingly, the present research urges airline managers to thoroughly understand the needs and requirements of the customers in order to satisfy them and induce customer repeat-patronage intentions (Alex and Anthony, 2011). Finally, the gap highlights how airline managers should monitor service quality and prioritise

resources to anticipate the needs of customers more effectively. To this end, focusing on strengthening market distribution channels to improve customer satisfaction and forming strategic alliances with renowned LCC companies in the region are logical areas for exploitation and growth.

Limitations and Future Directions

The findings of this exploratory research must be interpreted in the light of several limitations. An inherent limitation of this research pertains to its sampling frame. First, as the samples of this research were considered small, the results should be generalised with some caution to the entire LCCs. Second, this research considered only domestic flights as well as short-haul trips and therefore the resulted underlying dimensions of service quality might not be applicable to the long-haul trips or international flights. Finally, the survey sample comprises only a fraction of the population profile. Thus, the findings may not well represent the entire LCC industry service quality in Singapore.

There are several opportunities to expand this research. Extending the sample size and target audience are essential for gathering a broader perspective from the feedback of air passengers. The sample size used in the research focused mainly on young working adults and tertiary students with no segregation of gender, race and other demographics. In particular, future research could seek to comprehend the impact of different population categories in terms of gender, age, income and nationality on consumer's preference of LCC airlines. In addition, by involving passengers from Asia states beyond Singapore, a comprehensive evaluation can be obtained on passengers' perceptions of the services provided by the airlines. Finally, the research indicated a significant difference in the respondent perceptions between the Tangibles (Physical) and Tangibles (Employee) dimensions. In the SERVQUAL literature, employees and physical facilities are categorised under the Tangibles dimension. This may not precisely portray the differences of consumer perceptions in relation to these domains. Subsequent research could be conducted on this SERVQUAL dimensionality to ascertain the statistical variances.

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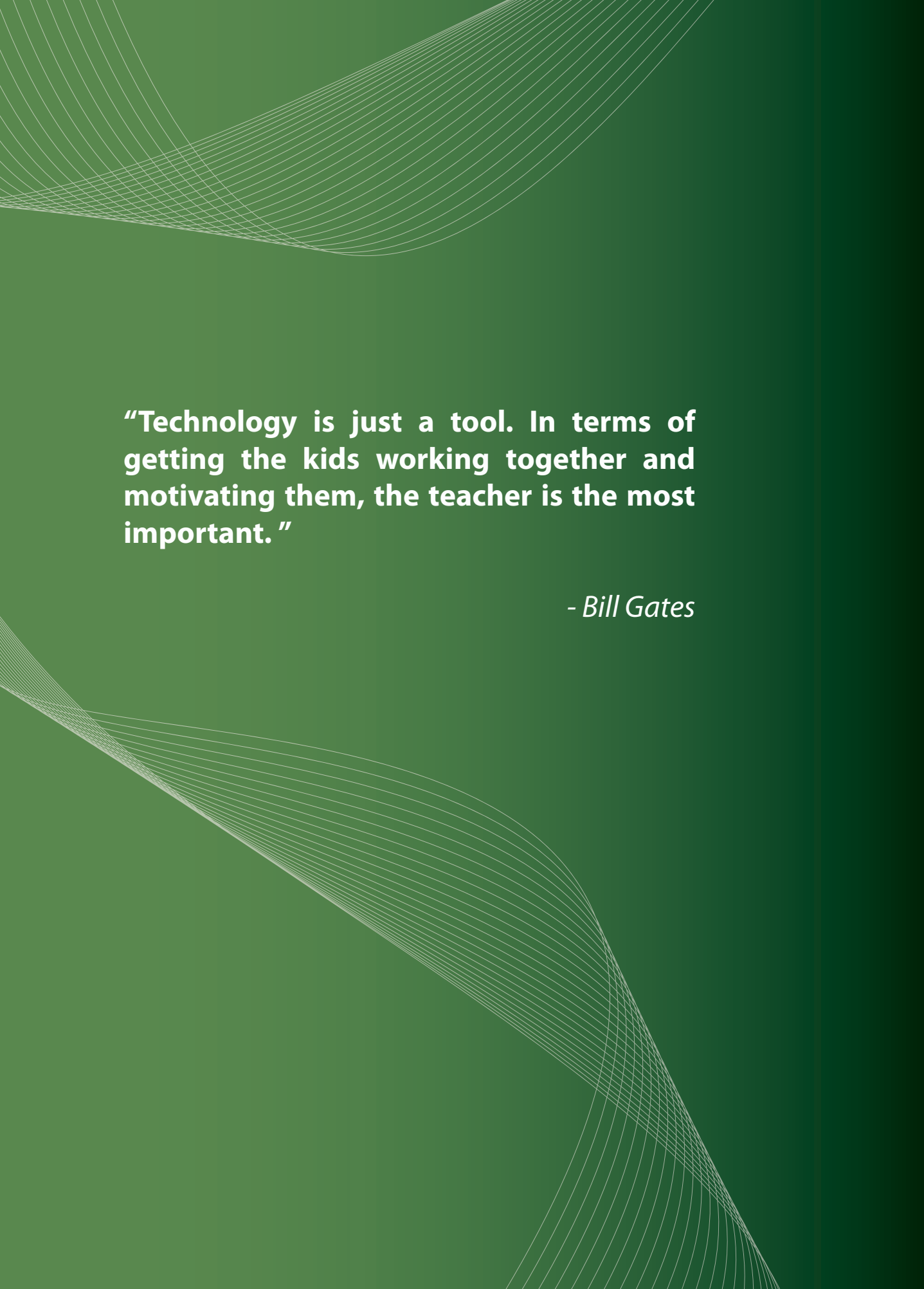
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"Technology is just a tool. In terms of getting the kids working together and motivating them, the teacher is the most important."

- Bill Gates

Impact of Information and Information Technology on Private Educational Institutions in Singapore

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Abstract

This is a study of the impact of information and information technology (IT) on private educational institutions (PEIs) in Singapore, specifically on the productivity and efficiency of PEIs, roles and teaching techniques of teachers, and on ways students learn. The research study was carried out in July-August 2011 and the data collected was specifically used to examine the impact of information and IT on PEIs in Singapore, namely, on the organisations, organisational structures and tasks, teachers, and students. It explored the thesis that information and IT did have an impact on organisation's structures; on productivity and efficiencies, on teachers in their way of teaching, and on students in their learning in this technological and digital age environment.

Following a brief literature review relating to the use of technology in education, the impact of information and IT on organisations management, teaching techniques on students, as well as the advent of e-learning and distance learning, a research framework was developed encompassing the research approach to be adopted, and data collection and analysis.

A survey questionnaire was developed and pilot tested for reliability and validity. It was then used to collect data from samples of 200 students, 200 teachers and 200 staff of PEIs in Singapore.

Keywords: Information, Information Technology, Private Education Institutions, E-learning, Distance Learning, Teaching and Learning Impacts

Introduction

It is common knowledge that information and information technology help organisations in many different ways and directions. Thanks to information technology (IT), many of the complex tasks and critical processes can be carried out with ease and efficiently. IT has many positive effects in the field of education and it definitely has made private education institutions (PEIs) in Singapore change for the better.

While the technology application in education is mostly focused at the institutional level (and specifically, the interaction between learner and educator), the contribution of technology to effective management is arguably of equal importance. Phatudi et al. (1997) commented that "an important use of technologies, which is often neglected in policy statements, is in support of management and administration of education and training". This has become more apparent to private education institutions in Singapore with the introduction of the Private Education Act 2009, requiring PEIs in Singapore to achieve high standards of management and administration professionalism, and higher quality academic excellence.

Advances in communications, information and information technology have created new opportunities for private education institutions to build and manage processes where members collaborate utilising technology to accomplish important learning, teaching and organisational tasks.

Research Topic

The impact of technology is one of the most critical issues in education (Webber, 2003). The use of information and communication technology create a powerful learning environment. It transforms the learning and teaching process in which students deal with knowledge in an active, self-directed, and constructive way (Volman and Van Eck, 2001).

In PEIs, the teacher and staff can achieve better quality in teaching methodology, and the organisation in its operations respectively through the use of information and information technology. Through the use of IT, students can access up-to-date information and research available with only a click of the mouse.

Research Aims and Objectives

The study examines the impact of information and IT on PEIs in Singapore, namely, on the organisations, organisational structures and tasks, teachers, and students. It was carried out to explore the thesis that information and IT do have an impact on organisations' structures; on productivity and efficiencies, on teachers in their way of teaching, and on students in their learning in this technology-filled, and digital age environment.

Three objectives inform this study. The first objective is to ascertain that information and IT do have a positive impact in helping PEIs in Singapore to be

more productive and efficient; the crucial role that it plays in helping their institutions in making more streamlined processes, administrative operations, and effective decisions, thus helping them "to achieve higher and more comprehensive standards in their corporate governance and administration; academic processes, student protection and support services, and financial viability" (MOE, 2008).

The second objective is to investigate the impact of information and IT in transforming the roles and teaching techniques of teachers.

The third objective analyses the impact of information and IT on the way students conduct their learning in this new knowledge-based, globally connected, and technology-filled environment.

Six hypotheses were developed to achieve the desired outcomes:

Hypothesis 1: There is a statistically significant positive impact and relationship between information (use of information, easy availability and accessibility, relevance, timing and accuracy) and management of private education institutions (PEI) organisations.

Hypothesis 2: There is a statistically significant positive impact and relationship between information (use of information, easy availability and accessibility, relevance, timing and accuracy) and PEI teachers.

Hypothesis 3: There is a statistically significant positive impact and relationship between information (use of information, easy availability and accessibility, relevance, timing and accuracy) and PEI students.

Hypothesis 4: There is a statistically significant positive impact and relationship between information technology (use of information technology, software, database, hardware and telecommunication) and management of private education institutions (PEI) organisations.

Hypothesis 5: There is a statistically significant positive impact and relationship between information technology (use of information technology, software, database, hardware and telecommunication) and PEI teachers.

Hypothesis 6: There is a statistically significant positive impact and relationship between information technology (use of information technology, software, database, hardware and telecommunication) and PEI students.

Literature Reviews

Impact on Organisation and Organisational Structure

With information technology, PEIs are free from the constraints of space and time, thus enabling them to deliver education services anywhere, anytime. The impact that information and IT has on the organisation is obvious. The introduction of internet and highly interactive learning must change the way PEIs operate. To be competitive, PEIs need to provide quality teaching and learning by investing substantially in IT and information technology infrastructure. "Investment in educational technology is

urged upon policy-makers as the path to educational quality" (Mergendoller, 1996). In fact, enthusiasts for educational technology argue that quality has, and will continue to increase rapidly, creating a "new educational culture" (Connick, 1997).

"The interaction between information technology and organisations is complex and is influenced by many mediating factors, including the organisation's structure, business processes, politics, culture, surrounding environment, and management decisions" (Laudon and Laudon, 2006). Organisational structure, employee skill base, product delivery, and marketing methodology must change with the adoption of new IT. Organisations must give careful and dedicated planning to the changes in processes, corporate culture, system management and operational objectives.

Impact on Management

IT has dramatically changed the business landscape. The use of IT is supposedly shaped by an organisation's cultures and business strategies; however, more often than not, the influence is stronger the other way round. Managers need to address their business strategic options, opportunities and issues created by IT.

Research indicates that the management of education institutions will undergo a change as well. Writers suggest that management will be forced to adapt their management styles in response to new information technology, at the same time, staying true to its vision of what is needed to allow students to be effective learners (Kershaw, 1996).

Change in Teacher's Teaching Techniques

The highest level of change is in the use of technology in teaching, beyond utilising it as an additional extra in the classroom. This is particularly noticeable on teaching methodology, recruitment and training of teaching staff, as well as course contents. Teachers are required to learn new sets of skills. Software programmes require teachers to produce better teaching materials to help improve the educational experience of the students.

Jones-Delcorde (1999) argues that for the foreseeable future, the computer is not likely to replace the instructor. However, he also believes that while IT stimulates creativity, it also stifles it by eliminating creative motivations. He considers the idea that computers may only be successful because they offer instant gratification.

Westera (1999) argues that it is unavoidable that the role of tutor will change. With so much information, students are less inclined to recognise the tutor's authority as an absolute expert. Lecturers are powerless to stop the flow of information to students (Cornell, 1999). Westera envisages the tutor/student relationship becoming more egalitarian. Empowering students to take responsibility for their own learning will become an effective learning technique. However, Jones-Delcorde (1999) suggests that learning could become more profound and meaningful if instructors simply supplement their current tools with innovative IT. He further states that the role of the lecturer will be changed a little, since, however virtual IT becomes, it will never

replace the visual, mental, and social stimulation of a good tutor. He believes learners remember more from a good tutor, and hints at the degeneration of the learning process if learners respond only to instant gratification. This view is supported by Knight (1996) who suggests that teachers are likely to focus on the role of facilitating learning, and providing guidance.

Impact on Students

Hutchison (1998) is of the view that there is nothing natural about traditional universities. There is nothing natural about being wrapped in cotton wool, and nurtured into what society deems acceptable in a bureaucratic environment. Researchers have advocated for education to move away from this sort of environment for the benefit of the students. Firstly, Schurer (1997) writes that virtual universities would liberate students from this regimented conduct of traditional universities. Students would need to learn how to access resources as opposed to being spoon-fed with information. Secondly, "in-time learning" allows curricula to be adapted to suit the needs of students. This encourages students to be more active learners, enhancing the intensity of learning experience (Pantelidis and Auld, 1995). Hutchison (1998) makes the third point. He agrees that students will benefit from a shift from the traditional "print culture" to a more sensory culture which would help students to forge links with images they see and remember, to information they need to learn. In addition, and as the fourth point, Joo (1999) believes that the Internet can make the content of lectures more vivid to students, stimulating the memory, and enhancing topic association. This could create an exceptionally positive attitude among students who previously experienced difficulty and failure in their learning (Adam and Wild, 1997). An interesting point to acknowledge, however, is that in the same way the Internet and other multi-media can relay positive and beneficial images, they can also reproduce strong stereo types (Joo, 1999) which can often lead to misinterpretation and the obscurity of rational judgement.

The availability and accessibility of large databases of information fundamentally changes education, as students can now create and discuss information freely. Young people are able to input into educational change as they are more tech-savvy, thus able to benefit from modern information technology. At the same time, the significant increase in speed in which information are distributed, and the availability and accessibility to huge amounts of information means students have to be more discerning in their selection, evaluation, and analysing of information.

Impact of e-learning

The use of the term e-learning means different things in different universities. Fry (2000) defines e-learning as "delivery of training and education via networked interactivity, and a range of other knowledge collection, and distribution technologies." Wild, Griggs, and Downing (2002) similarly defined e-learning as the creation and delivery of knowledge via online services in the form of information, communication,

education, and training. Bleimann (2004) stated that e-learning is a self-directed learning that is based on technology, especially web-based technology. He also stressed that e-learning is collaborative learning. In a broad and simple sense, e-learning can be referred to as the use of technology to support students in achieving their learning outcomes. The way it is used is often closely related to the geographical location of the university and its students.

E-learning uses information and communication technologies to broaden educational opportunity. It thus helps students develop skills they need to thrive in the 21st century. Evidence suggests that e-learning can deliver substantial positive impacts:

- More engagement by students enable them to develop skills required for the 21st century workforce.
- Teachers are more willing to engage in more personalised teaching, as they have more positive attitude towards their work.
- The involvement of parent/family may increase.
- Besides developing a better educated ready workforce, it will also result in direct job creation in the technology industry.

Impact of Distance Learning

Shachar and Neumann (2003) observed that while the origins of distance education can be traced back to the nineteenth century, "it has yet to be universally accepted relative to current and well-practiced face-to-face (F2F) programmes provided by traditional brick and mortar institutions". One of the most recent incarnations of distance education, online learning makes use of internet-based information and communication technology tools, and to a growing extent, the emerging array of next generation online technologies commonly known as Web 2.0. In terms of student achievement outcomes, research on the efficacy of distance education and e-learning applications in distance education have concluded that both distance education and distance e-learning can be an equivalent, or in some instances, a superior alternative to traditional classroom-based educational delivery (Abrami et al., 2006; Bernard et al., 2004; Ryan, 1996; Seifert, Sheppard, and Vaughan, 2008; Shachar and Newman, 2003). However, an extensive meta-analysis conducted by Bernard et al. (2004) has suggested that the positive impacts of distance e-learning on achievement are most attributable to issues of pedagogical effectiveness and efficiency, as opposed to the delivery mode or technology used in delivery.

Distance learning allows a PEI to expand its business by meeting the demand for education and training from the general populace and businesses. It offers the possibility of flexibility to accommodate the many time-constraints imposed by personal responsibilities and commitments. It is a big emerging market as there is an increasing acceptance from the population of the value of lifelong learning, beyond the normal schooling age. Institutions can benefit financially from this by adopting distance education, which allows learning to take place mostly or entirely off-campus,

thus reducing the need for institutional infrastructure such as buildings.

Research Methodology

The research framework below shows that inter-connectivity among information and information technology, student learning outcomes, lecturer teaching methodology, organisational productivity, and efficiency. PEIs in Singapore adopting information and IT are able to manage operations more efficiently and productively. New teaching methodology using advance technology helps teachers improve the quality of teaching to the benefit of students and their learning outcomes.

Quality Administration, Teaching Methodology and Learning Outcomes with the Adoption of Information and Information Technology
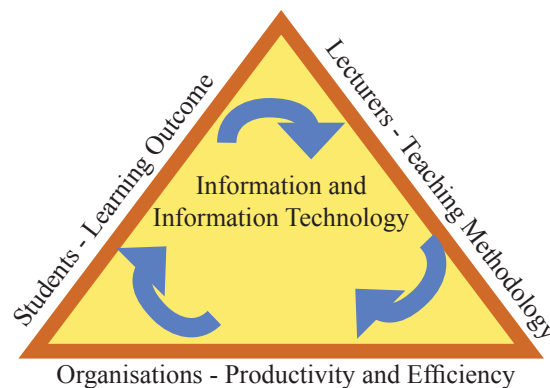
(Source: Created by Author for this study)

The next step is to adopt the appropriate research approach for this study. Research can be carried out by using the inductive research or deductive research approach. In this study, the deductive approach or quantitative technique using questionnaire survey methods was used. A specifically developed questionnaire was used to collect the primary data.

Pilot Testing

The pilot testing of the questionnaire was carried out, and necessary amendments were made before the final version of the questionnaire was distributed to the target participants. "The purpose of the pilot testing is to refine the questionnaire so that the respondent will have no problem in answering the questions, and there will be no problems in recording the data" (Saunders et al., 2007). Pilot testing helps to assess the survey questions, validity, and reliability of the data collected.

The questionnaire included questions on three dimensions; impact, information in general including: use of information, easy availability and accessibility, relevance, timeliness and accuracy of information and IT including software, hardware, databases, and telecommunication. Data was collected from a sample of 200 students, 200 teachers, and 200 staff of PEIs in Singapore.

Data collected was then edited to reduce errors in recording, improve legibility, clarify unclear and inappropriate responses in order to ensure consistency across respondents, and to locate omissions.

Data Analysis and Findings for Hypothesis

Method of Analysis

Quantitative methods of analysis for the collected data were used. The questionnaires in this study used a five-point Likert scales ranging from a scale of 1 (strongly disagree) to a scale of 5 (strongly agree).

Extremely Negative		Neutral		Extremely Positive
(1)	(2)	(3)	(4)	(5)
☐ Strongly Disagree	☐ Disagree	☐ Neither Agree nor Disagree	☐ Agree	☐ Strongly Agree

Data from the survey questionnaires were manually collated and inputted into the computer using the Statistical Package for Social Sciences (SPSS) software for analysis. The results were tabulated in the form of Tables listed as Appendices. Classification of the Spearman's Rank-Order Correlation coefficient ρ that is used in the data analysis is shown below.

Classification	Spearman's Rank-Order Correlation coefficient ρ (value range)
Weak	$0.0 \leq \rho \leq 0.39$
Moderate	$0.39 < \rho \leq 0.59$
High	$0.59 < \rho \leq 1.0$

The findings for each hypothesis are briefly discussed below.

Hypothesis 1 – Correlation between Information and Organisations

The results in Table 1 indicated that there is a moderate to high correlation between the information dimensions, namely, use and share of information (.479), easy accessibility and availability of information (.823), and relevant, timely, and accurate information (.916), and impact of information on organisations.

The hypothesis is further strengthened by the high number of respondents (Table 1) who agree or strongly agree that information has a positive impact on organisations (198), and that use and share of information (174), easy accessibility and availability (194), and relevant, timely, and accurate information (186), are all important to organisations.

Hypothesis 2 – Correlation between Information and Teachers

The results in Table 2 indicated that there is a weak to high correlation between the information dimensions, namely, use of information (.320), easy accessibility and availability of information (.814), and relevant, timely, and accurate information (.878), and impact of information on teachers.

The hypothesis is further strengthened by the high number of respondents (Table 2), who agree or strongly agree that information has a positive impact on teachers (187), use and share of information (188), easy accessibility and availability (191), and relevant, timely, and accurate information (147) are important to teachers.

Hypothesis 3 – Correlation between Information and Students

The results in Table 3 indicated that there is a weak to high correlation between the information dimensions, namely, use of information (.726), easy accessibility and availability of information (.233), and relevant, timely, and accurate information (.288), and impact of information on students.

The hypothesis is further strengthened by the high number of respondents (Table 3), who agree or strongly agree that information has a positive impact on students (163), use and share of information (193), easy accessibility and availability (191) and relevant, timely, and accurate information (193), is important to students.

Hypothesis 4 – Correlation between Information Technology and Organisations

The results in Table 4 indicated that there is a weak to high correlation between the information technology dimensions namely, use of IT (.789), having relevant application software and tools (.908), having a good database system (.534), and having a good hardware and telecommunication system (.155), and impact of IT on organisations.

Results from Table 4 further strengthen the hypothesis from the high number of respondents who agree or strongly agree that use of IT is important to organisations (182), having relevant application software and tools (183), having a good database system (197), and having a good hardware and telecommunication system (186), and IT, collectively have a positive impact on organisations (196).

Hypothesis 5 – Correlation between Information Technology and Teachers

The results in Table 5 indicated that there is a moderate to high correlation between the information technology dimensions, namely, use of IT (.893), having relevant application software and tools (.804), having a good database system (.540), and having a good hardware and telecommunication system (.474), and impact of IT on teachers.

Results from Table 5 further strengthen the hypothesis from the generally high number of respondents, who agree or strongly agree that use of IT is important to teachers (200), having relevant application software and tools (150), having a good database system (114), and having a good hardware and telecommunication system (131), and IT, collectively have a positive impact on teachers (168).

Hypothesis 6 – Information Technology and Students

The results in Table 6 indicated that there is a moderate to high correlation between the information technology dimensions, namely, use of IT (.751), having relevant application software and tools (.871), having a good database system (.624) and having a good hardware and telecommunication system (.524), and impact of IT on students.

Results from Table 6 further strengthen the hypothesis from the consistently high number of respondents, who agree or strongly agree that use of IT is important to students (195), having relevant application software and tools (159), having a good database system (183) and having a good hardware and telecommunication system (166), and IT, all have a positive impact on students (193).

Conclusion

Data analysis led to the finding that information and information technology have significantly impacted the private education sector in Singapore. Information and IT have helped to introduce many positive changes to students, teachers, and PEIs. The use of technology in the classrooms has enhanced lessons and instruction. The process of learning and teaching has become more effective, and more interesting with the introduction of new learning and teaching methods. The Internet technology has also revolutionised the educational sector with its easily accessible ocean of information. Accurate and viable information can be easily obtained by students through the Internet. The term interactive learning has been redefined. Unlike in the past where students are limited with who they are able to interact with, recent advances in technology enable them to easily interact with students of different cultures around the world. This has contributed to an increase in the depth of their knowledge.

Research Limitations

Preferably a survey research should be complemented by qualitative approaches, including the use of focus group interviews or unstructured interviews. However, because of time constraints and the likely lack of support from private education institutions officials, only quantitative methods were used. Another problem for this study is the generalisation of the findings. A large scale research with a larger sample size would justify greater generalisation over the private education system in Singapore. Further research could also study public education sector to test the proposed associations in a related context.

The data analysis using Spearman's Rank-Order Correlation and the variables tested are assumed to exhibit monotonic relationship. Findings for Hypothesis 3 – Correlation between Information and Students, and Hypothesis 2 – Correlation between Information and Teachers tend to exhibit non-monotonic behaviour characteristics amongst the two variables, namely, (students - information) and (teachers - information). There is also a high possibility that the findings of Hypotheses 2 and 3 are attributed by a third hidden variable. Further research is needed to explore this.

Research Ethics

There are certain ethical issues that have to be considered during the course of the research. The design of the research in this study is both methodically sound and morally defensible. The surveys conducted were based on a voluntary participation basis. Anonymity was assured as participants were not required to provide names or identifications. Surveys were carried out strictly on a private and confidential manner. Special care was taken to ensure the privacy of the data collected, to avoid misuse of the data collected by anyone else for any other purpose.

Table 1: Hypothesis 1: Correlation between Information and Organisations

Correlation / Statistics

	Use and share of information is important to staff of organisations	Easy accessibility and availability of information is important to staff of organisations	Relevant, timely, and accurate information is important to staff of organisations
Overall, information has a positive impact on organisations	Spearman's correlation .479 Moderate	Spearman's correlation .823 High	Spearman's correlation .916 High
198 out of 200 Agree or Strongly Agree	174 out of 200 Agree or Strongly Agree	194 out of 200 Agree or Strongly Agree	186 out of 200 Agree or Strongly Agree

Table 2: Hypothesis 2: Correlation between Information and Teachers

Correlation / Statistics

	Use of information is important to teachers	Easy accessibility and availability of information is important to teachers	Relevant, timely, and accurate information is important to teachers
Overall, information has a positive impact on teachers	Spearman's correlation .320 Weak	Spearman's correlation .814 High	Spearman's correlation .878 High
187 out of 200 Agree or Strongly Agree	188 out of 200 Agree or Strongly Agree	191 out of 200 Agree or Strongly Agree	147 out of 200 Agree or Strongly Agree

Table 3: Hypothesis 3: Correlation between Information and Students

Correlation / Statistics

	Use of information is important to students	Easy accessibility and availability of information is important to students	Relevant, timely, and accurate information is important to students
Overall, information has a positive impact on students	Spearman's correlation .726 High	Spearman's correlation .233 Weak	Spearman's correlation .288 Weak
163 out of 200 Respondents Agree or Strongly Agree	193 out of 200 Respondents Agree or Strongly Agree	191 out of 200 Respondents Agree or Strongly Agree	193 out of 200 Respondents Agree or Strongly Agree

Table 4: Hypothesis 4: Correlation between Information Technology and Organisations

Correlation / Statistics

	Use of IT is important to organisations	Having Relevant Application Software and Tools is important to organisations	Having a Good Database System is important to organisations	Having a Good Hardware and Telecommunication System is important
Overall, IT has a positive impact on organisations	Spearman's correlation .789 High	Spearman's correlation .908 High	Spearman's correlation .534 Moderate	Spearman's correlation .155 Weak
196 out of 200 Respondents Agree or Strongly Agree	182 out of 200 Respondents Agree or Strongly Agree	183 out of 200 Respondents Agree or Strongly Agree	197 out of 200 Respondents Agree or Strongly Agree	186 out of 200 Respondents Agree or Strongly Agree

Table 5: Hypothesis 5: Correlation between Information Technology and Teachers

Correlation / Statistics

	Use of IT is important to teachers	Having Relevant Application Software and Tools is important to teachers	Having a Good Database System is important to teachers	Having a Good Hardware and Telecommunication System is important to teachers
Overall, IT has a positive impact on teachers	Spearman's correlation .893 High	Spearman's correlation .804 High	Spearman's correlation .540 Moderate	Spearman's correlation .474 Moderate
168 out of 200 Respondents Agree or Strongly Agree	200 out of 200 Respondents Agree or Strongly Agree	150 out of 200 Respondents Agree or Strongly Agree	114 out of 200 Respondents Agree or Strongly Agree	131 out of 200 Respondents Agree or Strongly Agree

Table 6: Hypothesis 6: Correlation between Information Technology and Students

Correlation / Statistics

	Use of IT is important to students	Having Relevant Application Software and Tools is important to students	Having a Good Database System is important to students	Having a Good Hardware and Telecommunication System is important to students
Overall, IT has a positive impact on students	Spearman's correlation .751 High	Spearman's correlation .871 High	Spearman's correlation .624 Moderate	Spearman's correlation .524 Moderate
193 out of 200 Respondents Agree or Strongly Agree	195 out of 200 Respondents Agree or Strongly Agree	159 out of 200 Respondents Agree or Strongly Agree	183 out of 200 Respondents Agree or Strongly Agree	166 out of 200 Respondents Agree or Strongly Agree

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