



PERCEPTION TOWARD SERVICE QUALITY: A STUDY ON UNDERGRADUATE  
INTERNATIONAL STUDENTS OF ASSUMPTION UNIVERSITY

By  
SUWANNEE SAO-ONG

A Thesis submitted in partial fulfillment  
of the requirements for the degree of

Master of Business Administration

Graduate School of Business  
Assumption University  
Bangkok, Thailand

November 2005

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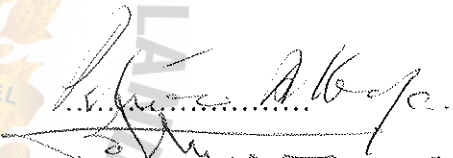
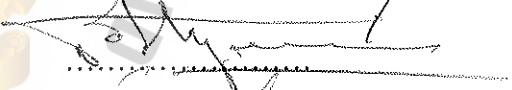
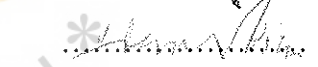

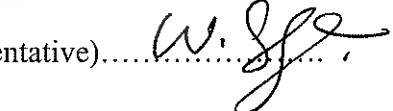
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## ABSTRACT

This research aimed to study undergraduate international student's expectations and perceptions of service quality of Assumption University by using the SERVQUAL model. The SERVQUAL model measures service quality in terms of five dimensions, which are tangibles, reliability, responsiveness, assurance and empathy. This research study also considered specific demographic factors, such as gender, age and nationality group, which might have an influence on the expectations and perceptions of the respondents.

The research design included seven hypotheses, used to measure the differences between international students' expectations and perceptions of service quality provided by Assumption University. A total of 380 questionnaires were distributed to undergraduate international students (sophomores, juniors and seniors) who are studying in the full-time program at Assumption University. From these, 360 questionnaires were valid and used for data analysis.

The findings showed that gaps between expectations and perceptions of undergraduate international students of Assumption University do exist and the students expect the university to improve the service quality for them. In addition, the analyses suggested that most demographic factors showed no differences with the service quality expectation. In contrast, there were differences in demographic factors and the service quality perception scores.

This research provided useful information for the university about service quality planning and improvement as well as provided managerial guidelines to improve the service quality.

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# CHAPTER 1

## GENERALITIES OF THE STUDY

### 1.1 Background of the Study

In an environment where most universities have quality management systems and where competition in the higher education sector is increasing, universities are now being forced to consider the student perspective of the quality of services provided. Previously the quality of the academic product was the major focus but now interest in measuring service quality in a higher education context has increased markedly (Wright & O'Neill 2003).

Customer service and quality are driving forces in the business community. Higher educational institutions providing high service quality to the students is at the heart of education business. Currently, a number of Thai universities have attempted to implement service quality, largely in response to the expectations of the students to improve their operational effectiveness.

Customer satisfaction is a key factor that any company needs to consider in maintaining a competitive business advantage. Attention to “service quality” can help an organization to differentiate itself from other organizations and through it gain a lasting competitive advantage (Moore, 1987). In some businesses “service quality” is considered more important than “product quality” because good services bring profitability to businesses.

The key success factor for business, in order to gain a long-term competitive advantage and customer loyalty, is service quality. Service quality is a measure of

organizational performance and is a prerequisite for establishing relationships with customers including students in educational institutions. To improve service quality, a university must devote more energy and attention as a way to differentiate itself from other universities, create customer value and satisfy customer's needs.

Students are the major stakeholders who evaluate satisfaction or dissatisfaction with a university's services. Students have the opportunity to decide on their continued enrollment with higher educational institutions, they can select the educational programs and services that meet their expectations.

It is clear that the majority of customers do evaluate service encounters and the process of service delivery to form perceptions of service quality (Parasuraman, Zeithaml and Berry, 1990). In a 1990 publication, the same three authors wrote that "It was clear to us that judgments of high service and low service quality depend on how customers perceived the actual service performance in the context of what they expected. Therefore service quality, as perceived by customers, can be defined as the extent of discrepancy between customers' expectations or desires and their perceptions (p.19)".

Thereafter, Parasuraman, Zeithaml and Berry (1991) embarked on developing an instrument for measuring customers' perceptions of service quality and suggested key factors as word-of-mouth communications, personal needs, past experience, and external communications that influence customers' expectations toward service quality. SERVQUAL model is an instrument for measuring service quality in this study because it employs a multiple-item scale that measures service quality as perceived by consumers. This model assesses service quality along five distinct dimensions, which are tangibles, reliability, responsiveness, assurance, and empathy.

Assumption University has been striving to become a service leader in the academic field. Therefore, the management and faculty of the university should be able to focus on the critical service dimensions and obtain greater understanding on how to allocate their resources to those service quality dimensions.

### **1.1.1 Overview of Assumption University of Thailand**

Assumption University was initially originated from Assumption Commercial College in 1969 as an autonomous higher education institution under the name of Assumption School of Business. In 1972, with the approval of the Ministry of Education, it was officially established as Assumption Business Administration College or ABAC. In May 1975, it was accredited by the Ministry of University Affairs. In 1990, it was granted new status as “Assumption University” by the Ministry of University Affairs.

### **Assumption University’s International Alliances Development**

To strengthen its competitiveness while simultaneously providing the students valuable opportunities to acquire academic knowledge as well as cultural experiences, the University has also developed alliances with universities in different countries such as USA, Canada, UK, Scotland, France, Sweden, Netherlands, Belgium, Finland, Argentina, Australia, New Zealand, South Africa, China, Philippines, Indonesia, and Vietnam.

Furthermore, it is also a member of several international associations, namely:

- Association of Christian Universities and Colleges in Asia (ACUCA)
- The International Federation of Catholic Universities (IFCU)
- The Association of Southeast Asia Institutions of Higher Learning (ASAIHL)

- European Culinary & Hotel Institute (RABELAIS)
- United Nations, High Commissioner for Refugees
- The Chartered Insurance Institute
- The Founding Member of the Internet Society
- International Association of University Presidents (IAUP)

In the year 2004, Assumption University has signed 12 Memoranda of Understanding (MOU) with universities from 10 countries, such as China and India, on such agreements as: student and faculty exchanges, twinning programs and general and research collaboration. These MOUs strengthen international alliances with other universities and together with existing MOUs resulted in more student and faculty exchanges, visits and collaborations among allied universities.

The university has 1,257 full-time lecturers and slightly over 500 staff members (Office of Human Resources Management, AU, 2005), while at the same time, the number of international students at Assumption University have increased very rapidly. This research focused on International students' expectations and perception of service quality.

In order to be a truly international university, Assumption University has also been active in its recruitment of international students from various countries. The University, at present, has 2,342 international students from about 57 countries, China, France, Germany, India, Japan Korea, Myanmar, New Zealand, Russia, Sweden, UK, and USA, to name but a few (The Office of the Registrar, AU 2005).



## **1.2 Statement of the Problem**

The rise in the number of higher education institution in recent years has led to increasing uncertainty in the education business. There are many Thai students who choose to study abroad to earn Bachelor degrees, learn new languages and to get to know more about foreign cultures. These are the same reasons that bring international students to study in Thailand. With the active on-going recruitment activities, the University is expecting to see an increase in foreign students' admissions in the future. Many state and private universities in Thailand have launched international programs in their curricula and they also use English language in the classes. This is an important fact indicating new competition for Assumption University.

To encounter this competition, Assumption University, as the "First International University of Thailand" has to increase the service quality of academic programs so that more students from abroad can be attracted. Therefore, this study focused on international students' perceptions of service quality at Assumption University to compete with other universities in Thailand and reduce the gap between students' expectations and perceptions of service quality.

### **1.2.1 Research Question**

- What are international students' perception of service quality of Assumption University?

## **1.3 Research Objectives**

The objectives of this research were as follows:

- 1.3.1 To examine the difference between international students' expectations and perceptions of service quality provided by Assumption University.

- 1.3.2 To identify international students' expectations and perceptions on five SERVQUAL dimensions in tangibles, reliability, responsiveness, assurance and empathy as provided by Assumption University.
- 1.3.3 Based on the findings, to recommend ways in which to improve the service quality in Assumption University.

#### **1.4 Scope of the Research**

The study focused on determining the difference between expectations and perceptions of service quality of the undergraduate international students in Assumption University, Thailand. The targeted respondents were 1,882 international students.

In conducting this research, the researcher identified the scope as follows:

- This research was done with international students in Assumption University only.
- The sample was selected from only those students who have spent at least one year at Au, hence only sophomores, juniors and senior students were selected as respondents.
- This research was based on the SERVQUAL instrument (Parasuraman et al. 1990).

#### **1.5 Limitations of the Research**

In conducting this research, the researcher would like to identify the limitations of this study as follows:

- The research focused attention on service quality provided to undergraduate international students of Assumption University, therefore this finding may

not be generalized for Thai students, students enrolled in evening programs, or graduate students.

- The research focused on specific demographic factors as age, gender and geographic area. It did not focus on all demographic factors.
- This study was conducted within Assumption University only, the results of this study cannot be generalized to other universities.
- The data for this study was collected at this point in time. Students' expectations and perceptions might change over time, hence the findings cannot be generalized for future points in time.

#### **1.6 Significance of the Study**

Private Higher Education Institutions of Thailand surveyed the number of students who are studying in Thailand and found that during January to September 2005, there were 4,170 international students enrolled in universities in Thailand which included 2,742 international students who opted for the Bachelor Degree (*Matichon Sudsupda*: Oct. 8, 2004). Nowadays, there are many private universities in Thailand that provide international programs to students. As the first international university of Thailand, Assumption University needs to maintain its leadership position in higher education by improving the quality of it's management, operations and by providing a high quality of services to internal and external customers.

This study explored the difference between expectations and perceptions of international undergraduate students on service quality of Assumption University. The findings of this study are related to international students' satisfaction with the service in the university, which can therefore serve as a guideline to develop the quality of services

based on five dimensions of SERVQUAL including tangibles, reliability, responsiveness, assurance, and empathy.

The findings of this study will aid in understanding student perceptions of service quality, as well as contribute to the growing body of literature on understanding customer satisfaction and service quality in the higher education sector.

Moreover, the findings will assist Assumption University in order to serve students better in the future, and develop service quality for achieving the highest level of its students' satisfaction so as to compete with other private universities in Thailand and neighboring countries.

### 1.7 Definition of Terms

The operational definition of terms used in this study were as follows:

**ABAC:** Assumption Business Administration College. Currently, it is Assumption University (AU).

**Assurance:** The knowledge and courtesy of employees and ability to convey trust and confidence in service provider (Parasuraman et al, 1990).

**Consumer Satisfaction:** A value judgment based on the gap between actual experiences and expectations of the consumer (Zeithaml et al., 1990).

**Empathy:** The caring and individual attention provided by employees to its customers (Parasuraman et al, 1990).

**Expectations:** is defined as desires or wants of consumers, i.e., what they feel a service provider should offer rather than what is offered (Parasuraman et al, 1988).

**Experiences:** A measure in a gap analysis of perceived service quality, and attitude level, at a given point of time (Parasuraman et al., 1988b).



**International Students:** Non-Thai students who are studying in Assumption University.

**Perceived Service Quality:** The long-term component of service satisfaction, and is a measure of how well a delivered service meets customer expectations of the service (Webster, 1991).

**Perception:** is defined by Parasuraman, et al. (1985) as customers' beliefs concerning the service received or experienced (Parasuraman et al, 1985).

**Quality:** the individual needs expectations, perceptions, and experience of the customer. An overall definition of quality is fitness for use (Levine, et al., 1991).

**Reliability:** The ability to perform the premise service dependably and accurately (Parasuraman et al, 1990).

**Responsiveness:** The willingness to help customers and provide prompt service (Parasuraman et al, 1990).

**Service:** An idea, task, experience, or activity that can be exchanged for value to satisfy the needs and wants of customers and businesses (Gilbert, 1999).

**Service Quality:** is the long-term component of service satisfaction and is a measure of how well a delivered service meets customers' expectations (Webster, 1991).

**Service Quality Dimensions:** It is the factors applied to measure the service quality as perceived by internal customers. These dimensions are tangible, responsiveness, reliability, assurance and empathy (Zeithaml, Parasuraman, Berry, 1990).

**Tangibles:** The appearance of service provider's physical facilities, equipment, employees and communication material (Parasuraman et al, 1990).

## **CHAPTER 2**

### **REVIEW OF RELATED LITERATURE AND STUDIES**

In a competitive market, excellence in service is the hallmark of success in and every industry is required to offer reliable service. Striving for high service quality has become an important strategy in the business to establish a competitive advantage. Since consumer's expectation and perception are the first priority for improvement, many organizations use consumer orientation to develop the service quality and hope to become a top player in the business.

There are several models which discuss service quality. Some of the relevant literature and theories are reviewed in this chapter to establish a conceptual framework of this study.

#### **2.1 Definition and Features of Service Quality**

##### **Service**

Service has four main characteristics include intangibility, inseparability, heterogeneity and perishability (Bitner, Fisk and Brown, 1993). Service cannot be touched like products, it cannot be returned or stored, it is shown in activities, or satisfaction. The central role for services in the business is a key factor in the competitive advantage. Understanding characteristics of service can help the firms to understand their customers. Thus, firms use a service strategy to differentiate themselves. Service is defined as an essentially intangible set of benefits or activities that are sold by one party to another (Gronroos, 1990, p.27).

## Quality

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Ghobadian, Speller, and Jones (1994) mentioned in their definition of quality that the term “quality” means different things to different people. This is why defining “quality” is often the first step in most “quality improvement” journeys. A common understanding and vision of what is meant by “quality” will help the organization to focus on its “quality improvement” efforts. Thus, defining “quality” is not only important from a semantic point of view but, more importantly, it is required to direct employees’ efforts towards a particular common cause. The common vision of quality is arguably more important in service organizations (Ghobadian, Speller and Jones; 1994)

The construct of quality as conceptualized in the services literature centres on perceived quality (Rowley, 1997). Perceived quality is defined as the consumer’s judgement about an entity’s overall excellence or superiority (Zeithaml, 1987). It differs from objective quality which involves an objective aspect or feature of a thing or event (Garvin, 1983; Hjorth-Anderson, 1984). Perceived quality is a form of attitude, related to, but not the same as, satisfaction, and resulting from a comparison of expectations with perceptions of performance (Rowley, 1997).

Olstavsky (1985) viewed quality as a form of overall evaluation of a product. Holbrook and Corfman (1981) suggested that quality acts as a relatively global value judgement. Other work by Parasuraman et al. (1991) supported the notion that service quality is an overall evaluation similar to attitude.

Lewis, Moore and Creedon (1988), defined quality as “consistently meeting or exceeding customer’s expectations”.

Ghobadish, Speller, and Jones (1994) further categorized the definitions of “quality” into five broad categories that are relevant to service organizations. These are discussed below:

“Quality” is defined as innate excellence. The product or service will have unequalled properties. However, this definition of quality has little practical application because prior identification of determinants of quality is not possible. Implicit in this definition of “quality” is the relationship between individual salience and the perceived quality. The presence of this relationship has important implications for “goods” and “service quality”.

#### **1. *Product- led***

“Quality” is defined as the units of goodness packed into a product or service. Thus, a “quality” service will contain more units of goodness than a lower “quality” service. This definition relies on the quantification of the service’s units of goodness or tangible attributes. In practice, however, it is not easy to clearly identify services’ attributes, let alone quantify them. In addition, “goodness” is not absolute but relative to a particular circumstance.

#### **2. *Process or Supply- led***

In this approach, “quality” is defined as “conformance to requirements”. The definitions of quality proposed by Crosby (1980), and Taguchi (1986), fall within this category. These definitions lay emphasis on the importance of the management and control of supply-side quality. The focus is internal rather than external. Such a definition is useful for organizations which perceive their problems as lying within the transformation or engineering process. Alternatively, this definition might be useful in



organizations producing either standard products or services, or where the output can be classified as a commodity. Organizations offering a “standard service” involving “low or short customer contact”, such as “refuse collection”, “postal service”, “home deliveries”, “public transport”, “financial services” and “fast food chains”, may find this definition useful. This is partly because of the important role of process in determining the quality of the outcome.

### ***3. Customer-led***

Here the focus is external. “Quality” is defined as “satisfying customer’s requirements” or “fitness for purpose”. The definitions of quality put forward by Deming (1986), Juran et al. (1974), Feigenbaum (1986), and Ishikawa (1985), fall within this category. This approach relies on the ability of the organization to determine customers’ requirements and then meet these requirements. A “customer-led” definition implicitly encompasses the “supply-led” approach. This is because customers’ requirements are built into the service at the design stage, but it is at the transformation stage that the degree of conformance is determined. The “customer-led” definition is probably most appropriate for organizations offering “high-contact”, “skill-knowledge-based”, or “labor-intensive” services such as, health care, law, accountancy, hairdressing, education, consultancy, leisure, and hotels.

### ***4. Value-led***

“Quality”, here, is defined either as the “cost to the producer and price to the customer” or as “meeting the customer’s requirements in terms of quality, price, and availability”. The focus again is external. The approach implies that there is a trade-off between “quality”, “price”, and “availability”. The purchaser evaluates “quality”, “price”

and “availability” within the same decision algorithm. Implicit in this approach is the importance of clear market segmentation and greater focus in the provision of service. Groococks (1986), definition of “quality” is a good example of a “value-led” definition. This definition of “quality” can be adopted by most service organizations.

Ghobadian, Speller, and Jones (1994) wrote that a “service”, as discussed previously, is intangible. Thus, the purchaser cannot judge its “quality” or “value” prior to purchase and consumption. Meister (1990) argued that in a service setting, customers judge quality by comparing their perceptions of what they receive with their expectations of what they should receive.

### **Service Quality**

Service quality is a fundamental feature in services marketing (Gronroos (1990), the interaction and network approach (Hakansson and Snehota, 1995) and relationship marketing (Morgan and Hunt, 1994). The construct of service quality as conceptualized in the service marketing literature centers on perceived quality, defined as a consumer’s judgment about an entity’s overall excellence or superiority (Zeithaml, 1987).

Lehtinen and Lehtinen (1982) defined service quality in terms of physical quality, interactive quality and corporate (image) quality. Physical quality relates to the tangible aspects of the service. Interactive quality involves the interactive nature of services and refers to the two-way flow that occurs between the customer and the service provider, or his/her representative, including both automated and animated interactions.

Numerous studies focus on dimensions of service quality. Researchers have used a variety of multivariate analysis techniques to derive service quality factors based on customer requirements (Sasser et al., 1978; Gronroos, 1984, 1990; Lehtinen and

Lehtinen, 1982; Quelch and Takeuchi, 1983; Parasuraman et al., 1985, 1988; Brady and Cronin, 2001).

Many authors (Gronroos, 1988; Lehtinen and Lehtinen, 1982; Parasuraman et al., 1985; Sasser et al. 1978) support the notion that service quality as perceived by customers stems from a comparison of what they feel that service organizations should offer (i.e. from their expectations) with their perception of the performance of organizations providing the services:  $\text{Quality} = \text{Customer's perception} - \text{Customer's expectations}$ .

Nowadays, service quality is one of the most important factors in developing successful relationships in the business. Every business focuses on service quality as the first priority to maintaining its customers. Understanding customers' needs and expectations are the main factors to success in the business. It is not easy to quantify the difference of customers' expectations because many customers have differences in experiences and needs.

Maister (1985) developed "Laws of Service", one of which suggests that the perceptions from a service encounter should equal or exceed the expectations. The implied formulation of this is **"Satisfaction = Expectations - Perceptions"**, if perceptions are higher than expectations, the satisfaction is positive, it means that the customer is satisfied.

Parasuraman et al. (1985) initiated a research stream that many consider to be the most comprehensive investigation into service quality. Parasuraman et al. (1985) proposed service quality to be a function of pre-purchase customer expectations, perceived process quality, and perceived output quality. They defined service quality as

the gap between customers' expectations of service and their perceptions of the service experience, ultimately deriving the now-standard SERVQUAL multiple-item survey instrument (Parasuraman et al., 1988).

An alternative model based on the importance/performance paradigm, assumes that on making their evaluation, consumers will use different criteria which are likely to vary in importance, and are weighted accordingly (Joseph and Joseph, 1997). Thus, SERVQUAL is a famous model that the researchers used to assess service quality perception.

## **2.2 Theories and Studies Related to Expectation and Perception**

In the service quality literature the term "expectations" have been mentioned as prediction of service performance and viewed as desires or wants of consumers. According to Parasuraman and Berry (1991) the term expectations as a comparison standard is commonly used in two different ways-what customers believe will occur in a service encounter (predictions) and what customers want to occur (desires). They also indicated two levels of expectations: a "desired level" and "adequate level". The desired service level reflects the service the customer hopes to receive. It is a blend of what customer believes "can be" and "should be". "The adequate service level reflects what the customer finds acceptable; it is a function of the customer's assessment of what the service "will be". The difference between the desired service level and the adequate service level can be called a zone of tolerance that customer considers satisfactory (Parasuraman and Berry, 1991).

As Parasuraman et al., (1998) mentioned, expectations in the satisfaction literature have been operationalized as prediction of service performance, while

expectations in the service quality literature are viewed in terms of what service providers should offer.

Koler, Boven, Maker (1996), argued that expectations are based on the customer's past buying experiences, the opinions of friends and associates, marketers, competitors information, and promise. Further, they said that the expectations of guests are formed by company image, word-of-mouth, the company's promotional efforts, and price.

According to Oliver (1980), customers compare their expectations with experiences. If the outcome falls short of expectations, it means negative discrepancy. If experiences meet expectations, there is no discrepancy. If the outcomes outperform expectations, there is positive discrepancy. Consequently, discrepancy will induce satisfaction or dissatisfaction.

### **2.2.1 Different Types of Expectations**

According to Teas (1993), three different interpretations of "expectations" are derived from an analysis of follow-up questions to an administration of the SERVQUAL questionnaire. One interpretation of expectations is as a forecast or prediction. The forecast interpretation of expectations cannot be discriminated from the disconfirmed expectation model of consumer satisfaction (Oliver 1980). A second interpretation of expectations is as a measure of attribute importance. When respondents use this interpretation, the resulting perception-minus-expectation scores exhibit an inverse relationship between attribute importance and perceived service quality, all other thing being equal. The third interpretation identified is the "classic ideal point" concept.

Parasuraman et al. (1994) describe this when they note that "the P-E (perception-minus-expectations) specification could be problematic when a service attribute is a



classic ideal point attribute-that is one on which a customer's ideal point is at a finite level and therefore, performance beyond which will displease the customer.

Three separate types of expectations have been described by Boulding et al. 1993 as follows:

1. The 'will' expectation, what the customer believes will happen in their next service encounter.
2. The 'should' expectation, what the customer believes should happen in the next service encounter.
3. An 'ideal' expectation, what a customer wants in an ideal sense. The ideal interpretation of expectation is often used in the SERVQUAL literature.

Boulding (1993) differentiated between should and ideal expectations by stating that what customers think should happen may change as a result of what they have been told to expect by the service provider, as well as what the customer views as reasonable and feasible based on what they have been told and their experience with the firm or a competitor's service.

"Expectancy disconfirmation" is the gap between perceived quality and expected quality. Expectations have also a direct effect on perceived quality. In particular, the higher the expectations, the higher perceived quality. Perceived quality is then compared to expectations, resulting in a disconfirmation, it can be either positive or negative (Rust, Zahorik, and Keningham, 1996).

### 2.2.2 Customer Expectations

Numerous authors call on the concept of expectation when discussing the nature and management of services. Most often, customer satisfaction and/or overall service quality is seen as a function of the comparison between a customer's expectations and his/her perception of actual service (Solomon *et al.*, 1985; Zeithaml *et al.*, 1993; Walker, 1995). Bitner and Hubbert (1994) note the distinction among the three concepts service encounter satisfaction, overall service satisfaction, and service quality. The phrase customer satisfaction at the point of delivery as used herein is consistent with their definition of service encounter satisfaction, i.e. customer dis/satisfaction with a discrete service encounter reflecting the feelings the customer has about a specific interaction or moment of truth. Although there is general agreement that both overall service quality and customer satisfaction are in some way influenced by the expectations of the customer, considerable work remains to be done to describe exactly how this process takes place.

What customers wish for (Miller, 1997), what they expect from an excellent service provider (Zeithaml *et al.*, 1990), what the customer hopes for (Zeithaml *et al.*, 1993), and what they think should happen in their next encounter (Boulding *et al.*, 1993). These concepts in the service quality literature shows that these expectations are expressions of what customers believe a service provider should offer rather than would offer. In addition, these 'should' expectations are often conceptualized as combining both customer wants and customer beliefs about what the service is capable of providing. Boulding *et al.* (1993) address this distinction by asserting that should expectations are not the same as the customer's ideal or desired standard. The customer may believe, for

example, that an expensive restaurant should have fine wines available (should expectation) even though the customer may have no desire to have them served. .

### **2.2.3 Literature Studies on Perception**

In appraising performance, managers use their perceptions of an employee's behavior as a basis for the evaluation (Nelson & Quick, 1997). According to Johns (1987), defined perception is the process of interpreting the message of our sense to provide order and meaning to the environment. The world is a complex place, and perception helps us sort out and organize the input received by our senses of sight, smell, touch, taste and hearing. Perception involves the way we view the world around us. It adds meaning to information gathered through the five senses of touch, smell, hearing, vision and taste. Social perception is the process of interpreting information about other persons. Virtually all management activity relies on perception.

Perception is the process by which we come to know the world so that we may act upon it (Northcraft & Nale 1994). People frequently base their actions on the interpretation of reality provided by their perceptual system rather than the reality itself. Some of the most important perceptions that influence organizational behavior are the perceptions that organizational members have of each other. Such perceptions have strong potential to influence the interactions between members, such as managers and employees (John 1987). Parasuraman, Zeithaml and Berry (1985) have suggested that it may be the perception of service quality that leads to customer satisfaction. This means that the customers will be satisfied when they perceived that the business has high service quality.

Perception is customers' beliefs concerning the service received and experienced. Antonides and Van Raaij (1998) pointed out that people differ in their perception of reality depending on their own experiences, life histories, and personal situations (Parasuraman, et al., 1985).

#### **2.2.4 Managing Expectations and Perceptions**

Rowley (1997) argued that the service contract between the firm and its customers must embrace formal, informal and psychological components. One way of examining the service contract further is to represent it in terms of the four Es: experience, environment, exchange and expectations.

These four Es can be equated to the traditional four Ps of the marketing mix:

1. experience = product;
2. exchange = price;
3. environment = place;
4. expectations = promotion.

This framework acknowledges that:

1. The service experience is the central product of the service contract, and the experience is a joint responsibility which emerges from adherence to the terms of the contract, and which is defined by those terms.
2. Exchange is shorthand for that which the customer gives to the service experience, which includes, but extends beyond, price.
3. Environment recognizes the importance of environment in communicating messages concerning the experience. Bitner (1990, 1992) emphasizes the impact of physical surroundings on the behaviour of both customers and

employees. Prior to “purchase”, consumers look for clues about the organization’s capabilities and quality from the physical environment. The environment is important in shaping perceptions and expectations.

4. Expectations will be influenced by prior experience, and reputation.

Promotion will make a major contribution to the expectations of the customer.

The quality of a product or service is the customer’s perception of the degree to which the product or service meets their expectations (Gaither, 1996).

### **2.3 Service Quality Measurement: SERVQUAL**

Ghobadian, Speller, and Jones, (1994) provide the term of “Quality” in a service organization is a measure of the extent to which the service delivered meets the customer’s expectations. The nature of most services is such that the customer is present in the delivery process. This means that the perception of quality is influenced not only by the “service outcome” but also by the “service process”. Measurement of service quality has been instrumental in making service industries more competitive (Caldwell, 1997) since service quality does not improve unless it is measured (Reichheld and Sasser, 1990).

#### **Development of SERVQUAL**

The prominence of business services in the global economy has become self-evident. The amount of money involved in sales of products and services to business buyers are ever-increasing and much higher than those to individual consumers (Kotler, 2003, Jackson and Cooper, 1988). As organizations have increasingly invested in the business services sector with the hope of gaining sustained competitive advantage, the delivery of quality service has taken on an important role in the strategic planning of



service organizations (Westbrook and Peterson, 1998). Since service quality has become the overriding concern of purchasers of business services, service providers focused on not only surviving but also thriving in turbulent national and international markets by delivering a certain level of service quality (Jackson and Cooper, 1988).

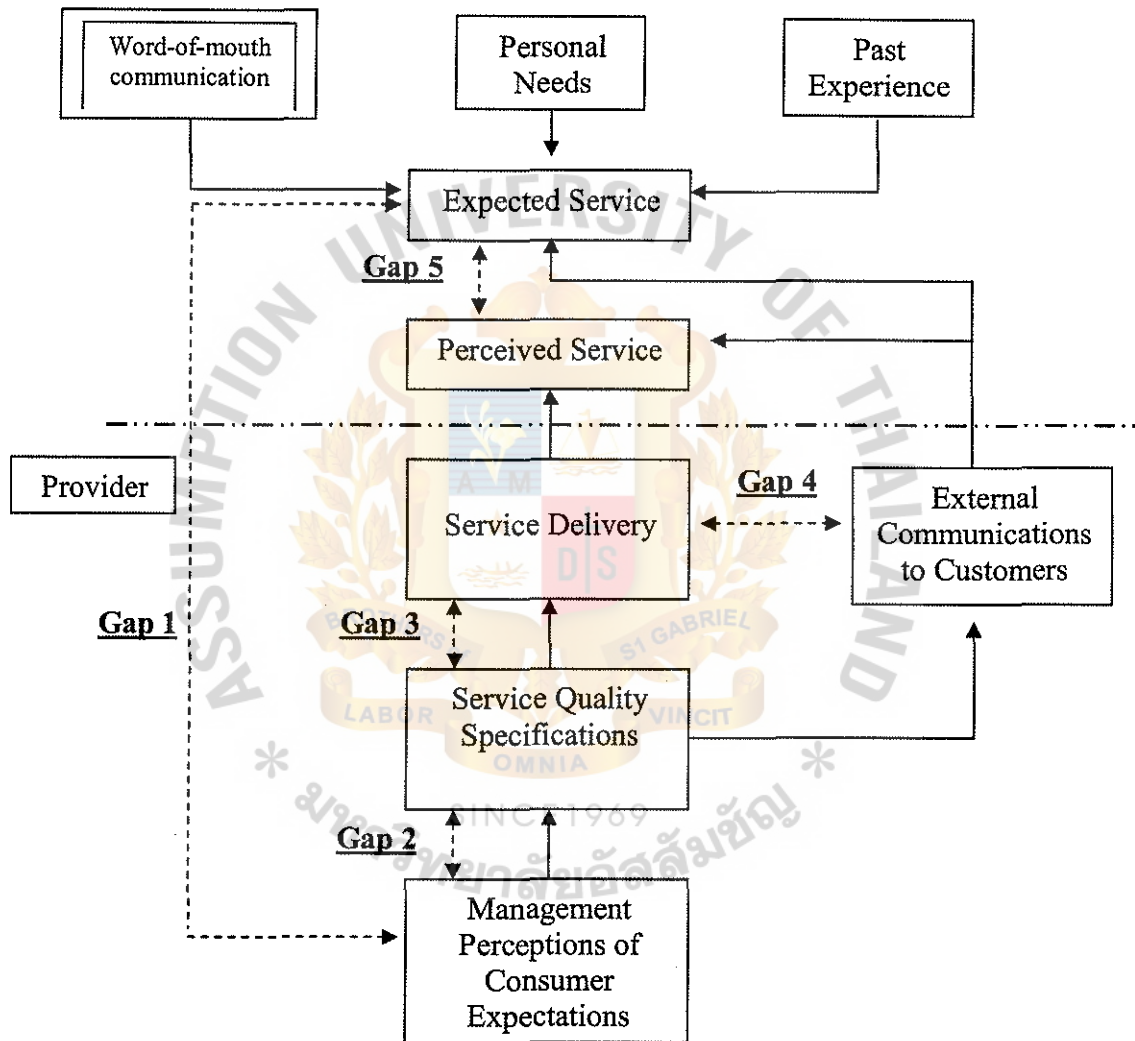
The most widely spread instrument to measure service quality is the SERVQUAL scale developed by Parasuraman, Zeithaml and Berry (1988). The SERVQUAL scale is a principal instrument in the services marketing literature for assessing quality (Parasuraman et al., 1991; Parasuraman et al., 1988). This instrument has been widely utilized by both managers (Parasuraman et al., 1991) and academics (Babakus and Boller, 1992; Carman, 1990; Crompton and MacKay, 1989; Cronin and Taylor, 1992; Johnson et al., 1988; Webster, 1989; Woodside et al., 1989) to assess customer perceptions of service quality for a variety of services (e.g. banks, credit card companies, repair and maintenance companies, and long-distance telephone companies).

The SERVQUAL instrument is based on the gap theory (Parasuraman et al., 1985) and suggests that a consumer's perception of service quality is a function of the difference between his/her expectations about the performance of a general class of service providers and his/her assessment of the actual performance of a specific firm within that class (Cronin and Taylor, 1992).

## 2.4 SERVQUAL Model / Gap Analysis

This model is described below:

### 2.4.1 Conceptual model of service quality (SERVQUAL) – The gap analysis model



Source: Zeithaml, A., Parasuraman, A. and Berry, L. (1990). *Delivering Quality Service: Balancing Customer Perceptions and Expectations*. New York: Free Press, p. 46.

The five gaps that are the causes of the service quality gap that customer may perceive are explained as follows:

**Gap 1:** The Management Perception Gap (Consumer expectation-Management perception gap). This gap means that management perceived the quality expectations inaccurately. This gap is, among other things, due to:

- Inaccurate information from market research and demand analyses;
- Inaccurately interpreting information about expectation;
- Nonexistent demand analysis;
- Bad or nonexistent upward information from the firm's interface with its customers to management; and
- Too many organizational layers, which stop or change the pieces of information that may flow upward from those involved in customer contacts.

**Gap 2:** The quality specification gap (management perception – service quality specification gap). This gap means the service quality specifications are not consistent with management perceptions of quality expectations. This gap is the result of:

- Planning mistakes or insufficient planning procedures;
- Poor management of planning;
- Lack of clear goal setting in the organization; and
- Insufficient support for planning for service quality from top management.

**Gap 3:** The service delivery gap (Service quality specification-service delivery gap). This gap means the quality specifications are not met by the performance in the service production and delivery process. This gap is due to:

- Too complicated and/or rigid specifications;
- The employees do not agree with the specifications, as, for instance, good service quality seems to require a different behavior;
- The specifications are not in line with the existing corporate culture;
- Lacking or insufficient internal marketing; and
- Technology and systems do not facilitate performance according to specifications.

**Gap 4:** The Market Communication Gap (Service delivery-external communications gap). This gap means that promises given by market communication activities are not consistent with the service delivered. This gap is due to:

- Market communication planning not integrated with service operations;
- Lack or insufficient coordination between traditional marketing and operations;
- The organization fails to perform according to specifications, whereas market communication campaigns follow these specifications; and
- An inherent propensity to exaggerate, thus promising too much.

**Gap 5:** The Perceived Service Quality Gap (Expected service-perceived service gap). This gap means that the perceived or experienced service is not consistent with the expected service. This gap results in:

- Negatively confirmed quality (poor quality) and a quality problem;
- Negative word-of-mouth;
- Negative impact on corporate or local image; and
- Lost business.

From the model, the larger gap between the expectations and perceived service quality means the consumers' dissatisfaction.

Brown and Swartz (1989) concluded that after having studied quality gaps for professional service, gap analysis is a straight – forward and appropriate way to identify inconsistencies between providers and client perceptions of service performance. Therefore, by studying this model, we can develop an understanding of the potential problem areas related to service quality and help to close any gaps that may exist in service operations as well.

#### **2.4.2 Gap Analysis Methodology for Measuring Service Quality:**

The use of expectation/experience gaps as a measure of service quality was advanced by the work of Gronroos (1988) and Lewis & Booms (1983) in the early 1980s, and Parasuraman et al. (1985; 1988b; 1991) in the mid-1980s. Gronroos's model was based on the notion that, customers evaluate service quality by comparing the service they expected with the service they received. Gronroos also proposed the existence of two types of service quality, technical quality and functional quality. Technical quality was defined as what the customer actually received and functional quality is the manner in which the service was delivered. The concept of measuring the difference between customer expectations and experiences (service gaps) has been the basis for some of the most recent researches in service quality (Schwartz, 1996).

Parasuraman et al. (1985, 1988b; 1991) modeled their research around the assumption of service gaps. Parasuraman et al. identified four potential gaps associated with the delivery of services to consumers; (a) Marketing information, (b) standards, (c) service performance and (d) communication. A marketing information gap is an



inadequate or inaccurate management understanding of customer service expectations. A standards gap is management's failure to develop service performance specifications reflecting customer expectations. A service performance gap is discrepancy between service performance specifications and the service actually delivered. A communication gap is a discrepancy between communications to the customer describing the service and the actual service delivered. A service gap occurs when experiences do not meet expectations in any of the areas. A quality gap is a discrepancy between the expected level of service and perceived level of service.

## 2.5 Service Quality Dimensions

This study uses the SERVQUAL to measure the service quality in the university. This instrument is based on the five quality dimensions **tangibles**, **reliability**, **responsiveness**, **assurance** and **empathy**. There are two parts to measure the process. The first step is to measure the customer's expectation of an ideal service. The second step is to measure the customer's actual perception of the service in reality. The definition of the SERVQUAL dimensions are as follows (Parasuraman, et al., 1985):

**Tangibles** - Physical facilities, equipment and appearance of personnel.

**Reliability** - Ability to perform the promised service dependably and accurately.

**Responsiveness** - Willingness to help customers and provide prompt service.

**Assurance** - Knowledge and courtesy of employees and their ability to inspire trust and confidence.

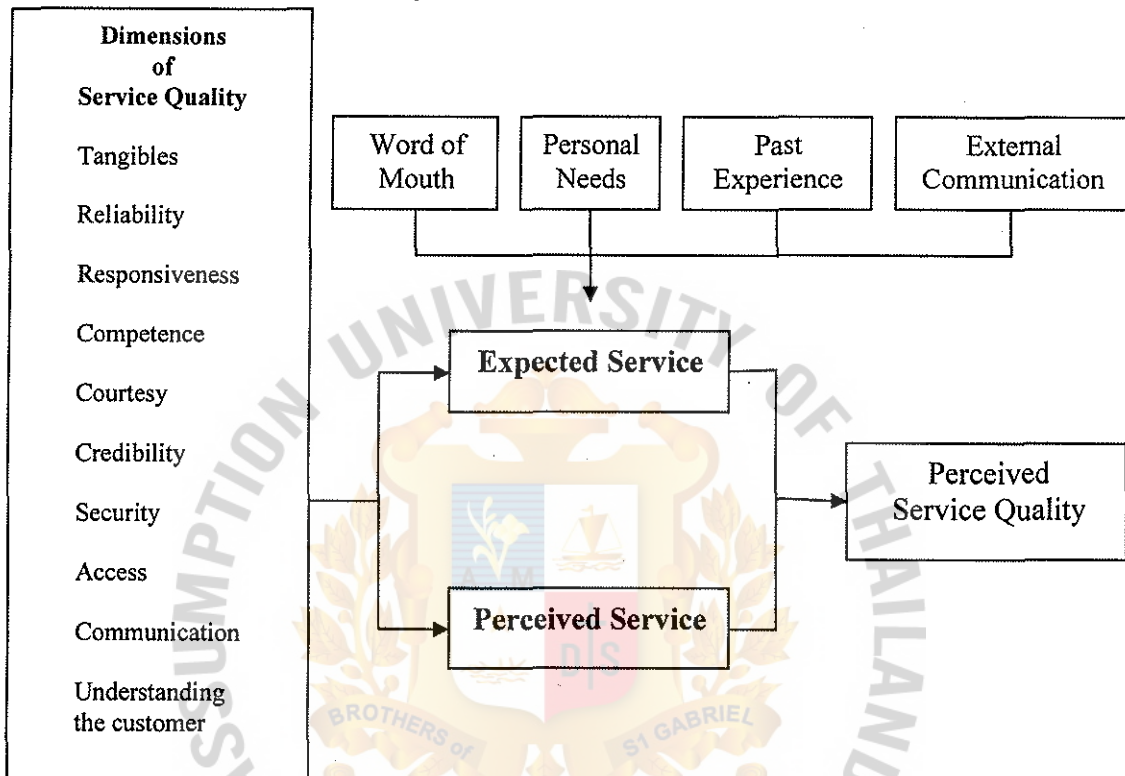
**Empathy** - Caring, individualized attention the firm provides its customers.

Parasuraman et al., (1990) discussed a number of factors affecting customers' expectations. First, word-of-mouth communications-what customers hear from other customers, is a potential determinant of expectations. Second, personal needs and preferences, e.g. customer of a credit card organization, for instance, may want a maximum credit limit, where other organizations pursue more strict policies on this matter. Third, past experiences affect customers' expectation level. Finally, the external communications of the service provider play a key role with regard to what and how expectations are formed as shown in Figure 1.1



**Figure 1.1: Customer Assessment of Service Quality**

**Customer Assessment of Service Quality**



Source: A. Parasuraman, Leonard L. Berry, and Valarie A. Zeithaml (1990), "Delivering Quality Service", Customer Assessment of Service Quality, p.23.

## 2.6 Criticisms of the SERVQUAL Model

There has however been some criticism of the use of the SERVQUAL instrument with a number of researchers debating whether the dimensions of SERVQUAL are consistent across industries with some studies not finding the standard five determinants reported by Parasuraman, Zeithaml and Berry (Babakus & Boller 1992, Cronin & Taylor 1992). Others have suggested that the instrument needs better wording for some of the scale items (Babakus & Boller 1992), but this was also recognized in the findings of a

follow up study undertaken by Parasuraman, Zeithaml and Berry who suggested that wording of the questions need to be tailored to the specific service application, in a language with which respondents can identify (Parasuraman et. al. 1991). On the other hand, many studies have reported the determinants to be stable across various types of industries (Lewis 1987, Gronroos 2000).

Validity problems in relation to the measurement of expectations and the practicalities of administering the instrument have also been raised in relation to the SERVQUAL instrument. It has been questioned whether it is practical to ask consumers about their expectations of a service immediately before consumption and their perceptions of performance immediately after the service as the expectations with which the consumer will compare their experience may be altered as a result of the service experience (Gronroos 2000). It has also been suggested that expectations may not be clear enough in a consumer's mind to act as a suitable benchmark against which perceptions can be compared, and that expectations are something that can be biased by previous service encounters (Gronroos 2000). However, theoretically, a comparison of expectations and experiences still makes sense, because expectations influence the consumer's perceptions of the quality of a service (Gronroos 2000).

Due to the controversy relating to the SERVQUAL instrument some researchers such as Cronin and Taylor (1992) now believe a more direct approach to the measurement of service quality is needed. Cronin and Taylor (1992) developed a measurement instrument called SERVPERF which is a performance only based measure of service quality. The SERVPERF instrument uses an attribute approach to measure customers' experiences of the service only. This instrument made use of the original

SERVQUAL scales and also requires the consumer to rate the provider's service performance along a seven point scale, but uses a single set of questions concerning post consumption perceptions of service quality and does not seek to measure expectations. Taking a single measure of service performance is seen to circumvent the issues of changing customer expectations as well as the need to administer a two part questionnaire each of which were criticisms of the original SERVQUAL instrument (O'Neill, Wright & Fitz 2001).

It is also postulated that when customers evaluate the quality of the service they receive, they use various criteria which are likely to differ in their importance (Martilla & James 1977). While several of the criteria may be important to the customer, only a few are most important and it is these attributes that will define service quality from the customers' perspective (Loudon & Della Bitta 1988).

## 2.7 Service Quality in Higher Education

Higher education, in common with much of the rest of the corporate sector, has a number of stakeholders, all of whom have a different experience of the higher education institution or the cumulative effect of the higher education sector.

Stakeholders include: students, their parents and family, the local community, society, the government, governing body, staff, local authorities, and current and potential employers. All of these stakeholders are concerned with the "end product" or the graduate. They are concerned to varying extents with the process associated with the creation of the product. For example, employers and society in general are concerned primarily with the "product" of the system, whereas students, and arguably their families, will also be concerned with the process (Rowley, 1997).



Most faculty in the universities are evaluated on the basis of their performance in three major areas:

1. Teaching;
2. Research; and
3. Service.

However, Lindahl (1995) suggested a different set of criteria to measure the quality of colleges and universities. Rather than the criteria that are commonly used in most of the popular ranking, Lindahl proposed that it was more appropriate to look at:

- How students rate the quality of instruction.
- Students' overall satisfaction with the education they are getting.
- Achievement of learning outcomes
- Whether they would recommend their university to others.
- Graduates' pass rates on licensing and professional exams.
- Admissions to graduate and professional schools.
- The findings of alumni surveys.

## **2.8 The Marketing of Education to International Students**

Education can be classified as a marketable service in the same way as any other service. Mazzarol's (1998) research among educational institutions in Australia, Canada, New Zealand, the UK and US, required respondents to rate their own institution's performance in terms of its international marketing on each of 17 identifiable critical success factors. The majority considered that their institution's performance was best in the areas of encouragement of innovation and the quality and experience of staff. Hughes

(1988), suggests that students select courses on the reputation of teaching staff while Bharadwaj et al. (1993) emphasize the importance of organizational learning and expertise as a source of competitive advantage.

Paramewaran and Glowacka (1995) in their study of university image find that higher educational institutions need to maintain or develop a distinct image to create a competitive advantage in an increasingly competitive market. Institutions are becoming more aggressive in their marketing activities and need to be clear about their positioning and the image they wish to convey to their public. An appropriate marketing mix can be developed which not only takes into account environmental factors, but also an identification of student needs and the ability of the institution to meet these needs.

## **2.9 Previous Studies on Service Quality in Education**

Schwartz (1996) used a modified SERVQUAL instrument to compare traditional and non-traditional students' views of service quality at one institution of higher education. Schwartz studied responses from 92 traditional undergraduate students (age 24 and under and 116 non-traditional undergraduate students (age 25 and over). The researcher also asked students to compare service quality (expected and received) from support staff with that from faculties. Schwartz used a 7-point Likert – type scale (1 = strongly disagree to 7 = strongly agree) in a questionnaire format. The questionnaire consisted of 39 items measuring students' expectations of service quality from faculty and staff and 39 items on their perceptions of service quality from faculty and staff. The dimensions of the instrument were determined through factor analysis. Instead of the 5 dimensions identified by Parasuraman et al. (1990), Schwartz identified only two dimensions.

Schwartz (1996) revealed no significant difference ( $p = .669$ ) in the expectations or perceptions of traditional versus non traditional students with regard to service quality. There was no significant difference ( $p = .901$ ) in students' expectations of support staffs versus faculty. However there was a significant difference ( $p > .001$ ) in the students' perceptions of support staff versus faculty, with staff scoring below faculty in every area measured in the instrument.

Hampton (1993) used a gap analysis approach based on model for his research on college student satisfaction with professional service quality. Hampton also applied the gap methodology (expectations minus experiences) to examine students' perceptions of service delivery. The author points out that very little empirical research using gap analysis methodology has been conducted in studying the delivery of professional services. When discussing the importance of studying student satisfaction with the delivery of professional services, Hampton (1993) wrote that, "one should note that gaps between actual experiences and expectations of clients is the general definition of consumer satisfaction" and that "perhaps university education is one of those services where satisfaction and service quality are one and the same" (pp.116-117). Hampton refined a 70-item questionnaire by asking graduate and undergraduate students to review the instruments to determine which of the 70 statements were relevant to their education experience. The final survey, containing 45 attributes, was similar in format to the SERVQUAL model. The survey's 45 statements were grouped into seven factors; (a) quality of education here, (b) teaching, (c) social life-personal, (d) campus facilities, (e) effort to pass courses, (f) social life-campus, and (g) student advising. Each item was measured on two separate scales, expectations and experiences. Expectations were

measured by having student respond to the items on a 7-point Likert scale that range from very important to very unimportant. Experiences were measured on a similar scale, ranging from very satisfied to very dissatisfied. The survey contained one additional item on overall satisfaction. Participants in the survey were students from a single university. Fifty classes were randomly selected for the study. This sampling method resulted in 1,200 initial surveys, with 473 completed, usable questionnaires being returned. Gap scores were computed by subtracting a respondent's experience score on each of the items from the expectation score for that same item. Each gap score was compared with the overall evaluation score using Pearson's product-moment correlation.

Hampton (1993) also found a negative correlation ( $p > .001$ ) between the gap scores and overall satisfaction. This finding supported the author's hypothesis that as the gap increases overall satisfaction decreases. A step-wise regression analysis was performed, using the summed expectation/experience gap scores of each factor to determine how the individual gaps related to overall satisfaction. Three significant independent factors emerged as a result of the regression equation. Factor one (Quality Education,  $-.38$ ) was the highest loading factor, followed by factor six (Social Life-Campus,  $-.13$ ), and factor five (Effort Needed to Pass,  $-.09$ ). Hampton (1993) concluded that, there was a significant relationship between students' perceptual gaps and their evaluation of service quality. Hampton also concluded that expectation/experience gaps could be a measure of service quality for the professional services delivered by institutions of higher education.

Kitcharoen (1999) studied the service quality of administrative units under the Office of Graduate Schools of Assumption University. His research aimed to study the

student's expectations, perceptions and satisfactions on service quality offered by the Office of Graduate Schools. It covered 31 performance attributes which were subdivided into 5 key variables of SERVQUAL model, which were tangible, reliability, responsiveness, assurance and empathy. The researcher distributed 800 sets of questionnaires to the respondents, covering all graduate students who were studying in Day and Evening programs at Assumption University. A total of 41.25% of the questionnaires were valid and used for analysis. The t-test was used to find out the frequency and multiple regression analysis was adopted to test the hypothesis for relationship of the performance attributes towards student satisfaction. The findings of this research showed that, in the opinion of graduate students, the Office of Graduate Schools was delivering low quality services to them and they expected the university and the office to improve the quality of services offered to them.

Mustafa (2002) studied the expectations versus experiences of MBA students of the University of Dhaka, Bangladesh. The purpose of his study was to determine if a gap analysis model (SERVQUAL) of service quality measurement could be appropriately applied to higher education. This research was aimed at the assessment of the service quality as per the expectations and perceptions of the MBA students of the Faculty of Business Administration and the Institute of Business Administration (IBA) of the University of Dhaka. It focused on the five dimensions of service quality in the broad variety of services provided by the University of Dhaka to its MBA students. The methodology of this research considered specific demographic factors, such as age, gender, working experience, occupation, and income, which might have influence on the expectations and perceptions of the respondents. The research instrument was based on



five dimensions of SERVQUAL instrument-tangibles, reliability, responsiveness, assurance and empathy. As a result of the findings, the researcher concluded that gaps between expectations and experience of Dhaka University MBA students do exist. The author stated that the practical value in identifying expectation/experience gaps at the University of Dhaka lies in the use of this information in quality improvement initiatives. The result of the study concluded that there were no differences between MBA student's age, gender, working experience, occupation and income and their overall satisfaction.

Kingphakorn (2003) studied user expectations and perceptions about service quality of St. Gabriel's Library of Assumption University. The purpose of this study was to incorporate user expectations and perceptions into an assessment quality of the service delivered by St. Gabriel's Library of Assumption University. The study focused on five dimensions of SERVQUAL model, which composed of tangibles, reliability, responsiveness, assurance and empathy. Testing of all five null hypotheses had been done by Paired-Sample t-test the mean differences between expectations and perception. A total of 356 questionnaires were distributed to students and faculty members who have used the services at the library. The result of this study showed that there were statistically significant difference between user expectations and perceptions of service delivered by St. Gabriel's Library on all five dimensions. These discrepancies indicated that the mean scores of perceptions, in all five dimensions of service quality, fall short of expectations. As a result, dissatisfaction occurred in all five dimension of service delivered by St. Gabriel's Library. From the findings, Tangibles showed the greatest mean scores different while Assurance showed the smallest one. This means that users are most dissatisfied with the tangibles dimension of service delivered by St. Gabriel's

Library, on the other hand, they are least dissatisfied with the assurance dimension of service delivered by St. Gabriel's Library.



## **CHAPTER 3**

### **RESEARCH FRAMEWORKS**

This chapter consists of four sections, these are the theoretical framework, the conceptual framework, research hypotheses, and operationalization of the independent and dependent variables.

In this study, the researcher examined international students' expectations and perceptions of service quality provided by Assumption University. According to the literature reviewed in chapter 2, there are two theoretical models that are related to the measurement of service quality and customer satisfaction. The conceptual model of service quality developed by Parasuraman, Zeithaml, and Berry (1990) is an important measure of consumer perceptions of service quality (SERVQUAL). A second theory is the one proposed by Patterson (1993) "Disconfirmation of Expectation" model, which indicated that service quality or performance of service has a direct relationship with overall customer satisfaction.

#### **3.1 Theoretical Framework**

The researcher examined the differences between international students' expectations and perceptions of service quality provided by Assumption University. For this purpose, the researcher employed the service quality model developed by Parasuraman, Zeithaml, and Berry (1990). In their comprehensive work on service quality, Parasuraman et al. (1985, 1988, 1990, 1991, 1993) developed an extended model of service quality, based on five distinctive gaps between what customers expect and what they perceive they receive. In their modified SERVQUAL model (Parasuraman et

al. 1991), the authors argued that the theoretical framework is grounded in a review of relationship between students' characteristics and perception of service quality dimensions.

The SERVQUAL scale includes five dimensions developed by Parasuraman, et al., (1985). These are:

1. **Tangibles:** appearance of physical facilities, equipment, personnel and communication materials.
2. **Reliability:** ability to perform the promised service dependably and accurately.
3. **Responsiveness:** willingness to help customers and provide prompt service.
4. **Assurance:** knowledge and courtesy of employees and their ability to convey trust and confidence.
5. **Empathy:** caring, the individualized attention the firm provides to its customers.

The second theory which was used to construct the conceptual framework is "Disconfirmation of Expectation" model (Patterson, 1993). This model compares customer's pre-purchase expectation and perceived performance from the service provider as below:

- $E < P$  = Customers feeling of satisfaction or delight.
- $E = P$  = Customers feeling of mere satisfaction.
- $E > P$  = Customers feeling of dissatisfaction.

3.2 Conceptual Framework

Independent Variable

Dependent Variable

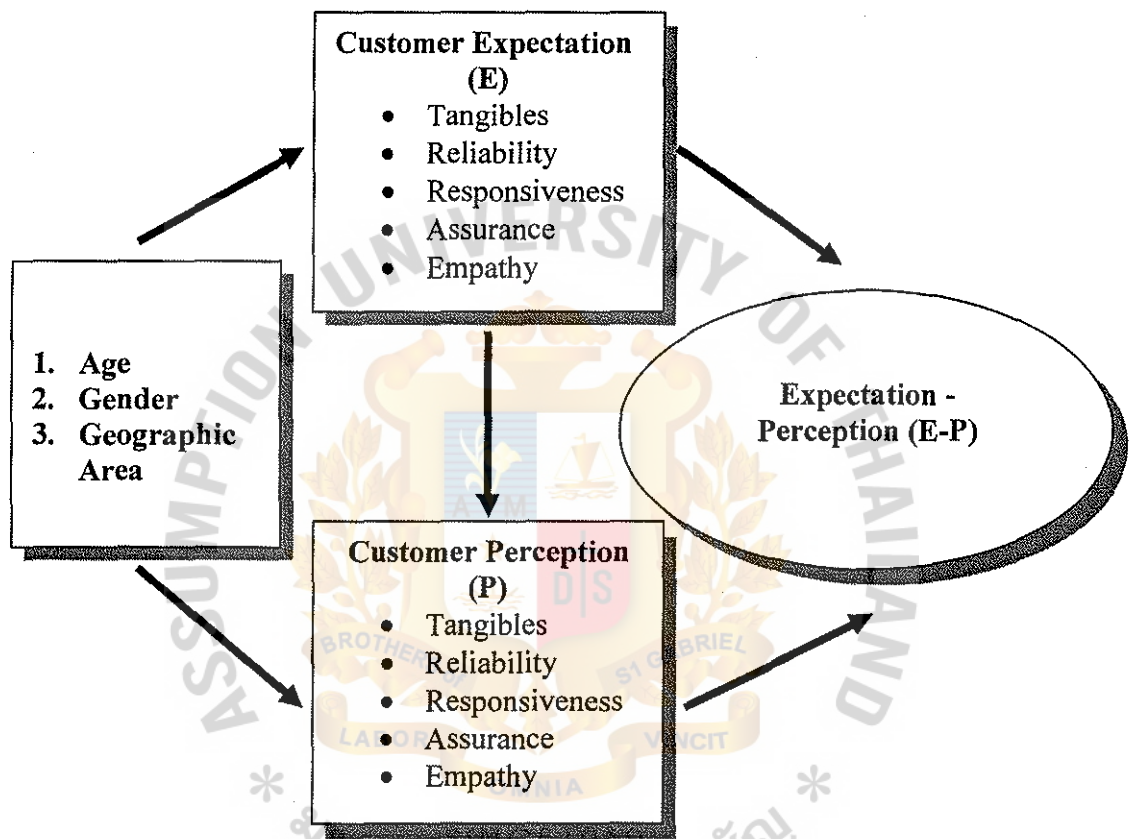


Figure 3.1: Conceptual Framework

As shown in the above conceptual framework, SERVQUAL variables were used as the basis of measuring student satisfaction in perceived service quality, which are discussed in the following research hypotheses.



### **3.3 Research Hypotheses**

Based on the conceptual framework presented above, the hypotheses in this section were used for measuring the service quality on each of the five dimensions, such as tangibles, reliability, responsiveness, assurance, and empathy.

According to the objectives of this study, the researcher posed the following hypotheses:

#### **Hypothesis 1**

Ho: There is no difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of tangibles.

Ha: There is a difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of tangibles.

#### **Hypothesis 2**

Ho: There is no difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of reliability.

Ha: There is a difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of reliability.

#### **Hypothesis 3**

Ho: There is no difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of responsiveness.

Ha: There is a difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of responsiveness.

#### **Hypothesis 4**

Ho: There is no difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of assurance.

Ha: There is a difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of assurance.

#### **Hypothesis 5**

Ho: There is no difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of empathy.

Ha: There is a difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of empathy.

#### **Hypothesis 6**

Ho: There is no difference in undergraduate international students' expectation of service quality under different demographic factors.

Ha: There is a difference in undergraduate international students' expectation of service quality under different demographic factors.

### **Hypothesis 7**

Ho: There is no difference in undergraduate international students' perception of service quality under different demographic factors.

Ha: There is a difference in undergraduate international students' perception of service quality under different demographic factors.

The above hypotheses were used for testing the differences in the same group that the subjects are measured twice as: "before" and "after" or "expected" and "perceived". All respondents were undergraduate international students who are studying in Assumption University.

### **3.4 Operational Components of Independent and Dependent Variables**

Operational definition refers to an explanation that gives meaning to a concept by specifying the activities or operations necessary to measure it (Zikmund, 1997). Thus, the operational definition specifies what must be done to measure the concept under investigation.

**Table 3.1: Operational Components of Independent and Dependent Variables**

Concept	Concept Definition	Operational Components	Level of measurement
(Independent) Demographic Factors	Refers to the study of statistical population or population proportion that is divided into three categories.	<ul style="list-style-type: none"> <li>• Age</li> <li>• Gender</li> <li>• Geographic Area</li> </ul>	Ordinal Nominal Nominal
(Dependent) Perceived Service Quality (E – P)	The long-term component of service satisfaction, and is a measure of how well a delivered service meets customer expectations.	<u>Expectation of service quality</u> <ul style="list-style-type: none"> <li>• Tangibles</li> <li>• Reliability</li> <li>• Responsiveness</li> <li>• Assurance</li> <li>• Empathy</li> </ul>	Interval
		<u>Perception of service</u> <ul style="list-style-type: none"> <li>• Tangibles</li> <li>• Reliability</li> <li>• Responsiveness</li> <li>• Assurance</li> <li>• Empathy</li> </ul>	Interval

**Table 3.2:** Independent Variables

Variables	Operational Components	Level of measurement
Age	<ul style="list-style-type: none"><li>• Under 20 years old</li><li>• 20 – 22 years old</li><li>• 23 years old and above</li></ul>	Ordinal
Gender	<ul style="list-style-type: none"><li>• Male</li><li>• Female</li></ul>	Nominal
Geographic Area	<ul style="list-style-type: none"><li>• African</li><li>• Asian</li><li>• European</li><li>• North American</li><li>• Others</li></ul>	Nominal



**Table 3.3: Perceived Service Quality of Assumption University**

Variable	Definition	Operational Components	Level of measurement
Tangibles	Appearance of physical facilities, equipment, personnel and communication materials.	<p>An excellent educational institution should have:</p> <ul style="list-style-type: none"> <li>• Modern-looking equipment.</li> <li>• Up-to-date physical facilities.</li> <li>• Smart faculty and staff appearance.</li> <li>• Materials associated with the service are visually appealing.</li> </ul>	Interval
Reliability	Ability to perform the promised service dependably and accurate.	<p>An excellent educational institution should:</p> <ul style="list-style-type: none"> <li>• Help students to solve problems.</li> <li>• Perform good service the first time.</li> <li>• Provide good service at the promised time.</li> </ul>	Interval
Responsiveness	Willingness to help customers and to provide prompt service.	<p>The staff in an excellent educational institution should:</p> <ul style="list-style-type: none"> <li>• Be willing to help students.</li> <li>• Provide prompt service.</li> </ul>	Interval

Variable	Definition	Operational Components	Level of measurement
Assurance	Knowledge and courtesy of employees and their ability to convey trust and confidence.	<p>The staff in an excellent educational institution should:</p> <ul style="list-style-type: none"> <li>• Have knowledge to answer students.</li> <li>• Make students confident and trust in service.</li> <li>• Provide courtesy to the students.</li> </ul>	Interval
Empathy	Provision of caring, individualized attention, which the firm provides its customers.	<p>An excellent educational institution should:</p> <ul style="list-style-type: none"> <li>• Give students individual attention.</li> <li>• Have advising hours convenient to students.</li> <li>• Make effort to understand the specific needs of students.</li> </ul>	Interval

## **CHAPTER 4**

### **RESEARCH METHODOLOGY**

The purpose of this study was to examine undergraduate international students' expectations and perceptions of the service quality provided by Assumption University. The method used to analyze the data collected helped answer the research questions proposed in this study. The first section focuses on the research methodology used. The second section explains respondents and sampling procedures. The third section elaborates on the research instruments and questionnaires development. The fourth section determines data collection/gathering procedures and the last section deals with the statistical treatment of data.

#### **4.1 Research Method**

In this descriptive study, the researcher used the SERVQUAL model developed by Parasuraman, Zeithaml and Berry (1988) to measure the service quality by gathering information from a sample of undergraduate international students in Assumption University. The respondents were students who had registered with the university during the semester starting June 2005. The respondents were asked to answer two sets of questions totaling 26 statements in each set. The tool of measurement adopted the general 5-point Likert scale.

#### **4.2 Respondents and Sampling Procedures**

The research's target respondents were the undergraduate international students at Assumption University, Bangkok, Thailand. Respondents were drawn from the undergraduate international students' list. Questionnaires were distributed to

undergraduate international students who study in AU only. For this study, freshmen were excluded as they had not spent adequate time at the university to answer all the questions on the 5 dimensions.

#### 4.2.1 Sample Size

The table below shows the number of undergraduate international students in Assumption University as of June 2005.

**Table 4.1:** The number of undergraduate international students in AU, 2005\*

No.	Nationality	Total
1	American	27
2	Australian	5
3	Bangladeshi	87
4	Belgian	4
5	Bhutanese	9
6	Brazilian	2
7	British	10
8	British (Overseas)	4
9	Cambodian	25
10	Canadian	4
11	Chinese	804
12	Danish	1
13	Dutch	6
14	Ethiopian	2
15	Filipino	17
16	Finnish	4
17	French	23
18	German	5
19	Hongkongian	2
20	Hungarian	2
21	Indian	77
22	Indonesian	11
23	Iranian	16
24	Iraqi	1
25	Israeli	8
26	Japanese	50
27	Kazakhstan	1
28	Korean	82
29	Kyrgyz Republic	2
30	Laotian	17

No.	Nationality	Total
31	Lebanese	1
32	Malaysian	6
33	Mongolian	4
34	Myanmar	214
35	Nepalese	27
36	Nigerian	2
37	Norwegian	7
38	Pakistani	11
39	Polish	5
40	Romanian	2
41	Russian	17
42	Senegalese	2
43	Singaporean	13
44	South African	1
45	Sri-Lankan	11
46	Swedish	9
47	Taiwanese	78
48	Turkish	14
49	Ukrainian	1
50	Uzbekistan	14
51	Vietnamese	135
<b>Total</b>		<b>1,882</b>

**Source:** The Registrar's Office, Assumption University, 2005

\* The number does not include freshmen.

According to the table, the number of undergraduate international students in the second, third and fourth year is 1,882. The researcher determined the sample size as 356 samples as per the table of sample size by Anderson (1996) that is shown in Table 4.2, based on 95% confidence level (5% tolerable error).



**Table 4.2:** Theoretical Sample Sizes for Different Sizes of Population and a 95 percent level of certainty

Population / (Sampling Frame)	Require Sample for Tolerable Error			
	5%	4%	3%	2%
100	79	85	91	96
500	217	272	340	413
1,000	277	375	516	705
5,000	356	535	897	1,622
50,000	381	593	1,044	2,290
100,000	382	596	1,055	2,344
1,000,000	384	599	1,065	2,344
25,000,000	384	600	1,067	2,400

Source: Gary Anderson, Fundamental of Education Research, 1996, P.202

#### 4.3 Research Instruments/Questionnaires

This study employed the SERVQUAL instrument to measure service quality of Assumption University as perceived by undergraduate international students. The SERVQUAL model consists of five dimensions of service quality (tangibles, reliability, responsiveness, assurance, and empathy). The SERVQUAL model measures the service quality by evaluating the Gap 5 or the discrepancy between customer's expectation of excellent and customer's perception of actual service delivered. "Perceived Service Quality = Expectation – Perception".

This study adapted the SERVQUAL instrument developed by Parasuraman, Zeithaml and Berry (1988) to measure the service quality by gathering information from the respondents. The researcher used 2 sets of questionnaires to gather information from respondents, one on expectation and the second on perception. There are twenty-six statements in each section. A set of statements are created to represent five dimensions of service quality including tangibles, reliability, responsiveness, assurance, and empathy. For each SERVQUAL statement, the respondents are provided with a five-point Likert scale ranging from “Strongly Disagree” to “Strongly Agree” as follows:

- 1 = Strongly Disagree – almost never possesses this feature
- 2 = Disagree – seldom possesses the feature
- 3 = Neither – Agree or Disagree (sometimes will and sometimes will not possess this feature)
- 4 = Agree – often possesses the feature
- 5 = Strongly Agree – almost always possesses the feature listed

#### **4.4 Collection of Data/Gathering Procedures**

The data for this study were gathered by distributing questionnaires to students who attended the Ethics Seminar (for international students) at Assumption University, both at the Hua Mak and Bang Na campuses. This seminar is a mandatory requirement for all students at Assumption University in each semester. As mentioned earlier, students need to have spent at least a period of time at Assumption University in order to respond to all questions in the SERVQUAL instrument, therefore, only sophomores, juniors and senior international students were given the questionnaire. Students were

given sufficient time to complete the first part of the questionnaire before the start of the seminar and were given time to complete the second part at the end.

Two ethics seminars, one at Hua Mak and one at Bang Na campus were scheduled in the month of September 2005. A total of 813 students of sophomore, junior and senior years attended the seminars at the two locations. Judgement sampling was used to select the samples and they were asked to fill out the self-administered questionnaires.

#### **4.5 Pre-Testing**

Pre-testing referred to the testing of the questionnaire on a small sample of respondents to identify and eliminate potential problem (Malhotra 2004). In order to conduct the pretest, the number of respondents should be between 25-50 respondents (Vanichbuncha, 2000). The researcher used 35 questionnaires to pre-test the questions in terms of sequencing, wording and structuring. These 35 questionnaires were distributed to international students enrolled in Assumption University's undergraduate continuing education program in summer semester (April 2005). A total of 32 completed questionnaires were used in the analysis.

Cronbach's Coefficient Alpha scales in SPSS program were chosen to code and process the data from the questionnaires. The pretest was used to determine if the order of appearance of questions had any effect on the results. The pretest was also used to measure the reliability and validity of the scales used in the study. The results of reliability testing are processed by SPSS program as shown in the table below:

**Table 4.3: Reliability value of Pre-testing**

Service Quality Dimension	Reliability Value (Alpha)	Reliability Value (Alpha)
	Expectation	Perception
Tangibles	0.861	0.848
Reliability	0.805	0.768
Responsiveness	0.888	0.848
Assurance	0.763	0.723
Empathy	0.871	0.733

According to Anderson and Gerbing (1988) a threshold of reliability of 0.70 is acceptable, while over 0.80 is good (Sekaran, 2000). The reliability analysis against these scales yielded favorable results. The constructs exhibited a high degree of reliability in terms of coefficient alpha. All values of reliability exceeded the recommended valued of 0.70 (Nunnally and Bernstein, 1995). The composite reliability for internal consistency demonstrated for all constructs, was 0.8, hence, the internal consistency reliability of the measures used in this study can be considered as having sufficient validity for use in this study.

#### **4.6 Statistical Treatment of Data**

The statistical tools, which are used in this research questions are as follows:

1. The Cronbach's coefficient alpha test will be used to measure the reliability of the SERVQUAL questionnaire.
2. The Statistical Package for Social Sciences (SPSS) program is the program used to analyze the available data by using the appropriate technique.

#### **4.6.1 Descriptive Analysis**

Descriptive analysis is applied to transform the raw data into a form that will make it easy to understand and interpret. The data are rearranged, ordered and manipulated to generate information such as frequency, distribution, percentage distribution and means (Zikmund, 2000). Descriptive statistics was used to determine the demographic backgrounds of the respondents. Also, these were used to evaluate the relationship of the respondents' demographic and their SERVQUAL scores. In this research, these statistics were used to summarize the demographic characteristics of the respondents which consisted of age, gender and geographic area.

#### **4.6.2 Inferential Statistics**

**4.6.2.1 Paired-Sample T-Test:** Paired-Sample T-Test allows the researcher to make a probability statement regarding whether two independently selected samples represent a single population. By independently selected samples, this means that the choice of one sample does not depend in any way on how the other sample is chosen. T ratio will be calculated to find the ratio of the difference between the two sample means and the population mean of the entire sampling distribution of differences to the estimated standard error of that distribution (Sprinthall, 1997).

The Paired-Sample T-test will be used to test hypotheses 1-5 in order to find the mean score of expectation and perception of each service quality dimension. In the formula for Paired Sample T-test, the statistic  $t$  with  $(n-1)$  degrees of freedom is defined as follows (Cooper & Schindler, 2001):

$$T = \frac{\overline{D}}{SD \sqrt{n}}$$

Where  $\overline{D}$  = the average difference between the pair.

$SD$  = the standard deviation of distribution of the difference between the pairs or related observations.

$n$  = the number of paired observation

(Degrees of freedom =  $n-1$ )

**4.6.2.2 ANOVA:** The appropriate technique to measure the statistical significance of the differences between two or more means is analysis of variance, often referred to by its acronym, ANOVA (Alreck and Settle, 1995). ANOVA allows the researcher to compare differences among many sample groups. Whereas T is “for two”, the F ratio can theoretically handle any number of group comparisons. It can design experiments in which the independent variable is manipulated through a whole range of values. Analysis using the T Test means that the independent variable can have only two levels, one for the experimental group and one for the control group. With ANOVA, a researcher may set up a number of experimental groups to compare with the control group (Sprinthall, 1997). The researcher use ANOVA in order to compute the mean difference between dependent (expectations and perceptions) and independent (demographic characteristics) variables. The level of statistic significant in this research is at the  $\alpha = 0.05$  or 95% level of confidence in order to test the hypotheses.



**Table 4.4: The Statistical Test for Hypotheses**

<b>Hypotheses</b>	<b>Statistical Test</b>
<p>Ho1-Ho5: There is no difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of five dimensions of service quality</p> <p>Ha1-Ha5: There is a difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of five dimensions of service quality.</p>	<p>Paired-Sample T Test</p>
<p><u>Expectations:</u></p> <p>Ho6: There is no difference in undergraduate international students' expectation of service quality among different demographic factors.</p> <p>Ha6: There is a difference in undergraduate international students' expectation of service quality among different demographic factors.</p> <p><u>Perceptions:</u></p> <p>Ho7: There is no difference in undergraduate international students' perception of service quality among different demographic factors.</p> <p>Ha7: There is a difference in undergraduate international students' perception of service quality among different demographic factors.</p>	<p>ANOVA</p> <p>ANOVA</p>

## **CHAPTER 5**

### **PRESENTATION OF DATA AND CRITICAL DISCUSSION OF RESULTS**

The purpose of this chapter is to delineate the analysis of all data gathered from the respondents in order to measure the service quality that Assumption University provides to the students by determining the difference between international students' expectations and perceptions about the university. The SERVQUAL questionnaire was distributed and collected by the researcher from undergraduate international students in September 2005. Three hundred and eighty international students enrolled in undergraduate courses at Assumption University participated in the study. Of the total, 360 respondents submitted complete questionnaires. The data analysis presentation and interpretation of the findings in this chapter consists of the following sections:

1. Reliability Analysis: to measure the reliability of the five dimensions of service quality by Cronbach's Coefficient Alpha.
2. Description of Demographic Factors: to summarize the demographic factors, which will be presented by frequency and percentage.
3. Hypothesis Testing: to measure the service quality provided by Assumption University to its international students.

#### **5.1 Descriptive Statistics of Demographics Characteristics**

Table 5.1 shows the demographic characteristics of Assumption University's international students. The demographic characteristic includes gender, age and geographic area.

Table 5.1: Summary Statistics of the Samples (N=360)

Demographic	Characteristics	No. of Respondents	Percentage
Gender	Male	173	48.1%
	Female	187	51.9%
Age	Under 20 years old	39	10.8%
	20 – 22 years old	209	58.1%
	23 years old and above	112	31.1%
Geographic Area	African	2	0.6%
	Asian	337	93.6%
	European	18	5.0%
	North American	3	0.8%
Total		360	100.0%

A demographic profile of the respondents, summarized in Table 5.1, indicates that more of the respondents were female, 51.9% versus 48.1%. A total of 58.1% of the respondents were 20 to 22 years of age. The majority of respondents in this survey were of the Asian geographic area.

## 5.2 Reliability of Data

The researcher used the SERVQUAL survey instrument to measure the differences between students' expectations and perceptions (Gap 5) of service quality of Assumption University by using a five-point Likert scale. Table 5.2 and table 5.3 show the inter-item reliability (Cronbach's alpha) estimate for each dimension, mean, and standard deviation.

**Table 5.2:** Reliability Analysis-Scale (Cronbach's Coefficient Alpha) of Students

Expectations and Perceptions of Five SERVQUAL Dimensions

**Reliability Coefficients (Cronbach's Alpha)**

Dimension of Service	Expectation		Perception	
	Pretest	Survey	Pretest	Survey
Tangibles	.8529	.8539	.8471	.8304
Reliability	.7979	.8942	.7638	.8732
Responsiveness	.8853	.8903	.8462	.8980
Assurance	.7535	.7980	.7192	.7723
Empathy	.8703	.8715	.7256	.8441

The reliability estimates for the data from the pretest and survey fall well above the generally accepted minimum value of 0.70, indicating that the items for each construct are internally consistent (Nunnally and Bernstein,1995). It implies that the questionnaire used for this study is reliable.

Table 5.3 was the conclusion of part II and part III of the questionnaire. The questionnaire asked the respondents to rate the scale of service quality level that they expected (part II) and perceived (part III) from Assumption University. The scales 1 to 5 ranged from 'strongly disagree' to 'strongly agree' and the questionnaire was separated into five dimensions of service quality, which were tangibles, reliability, responsiveness, assurance, and empathy.

**Table 5.3:** Mean and Standard Deviation of Students Expectations and Perceptions of Five SERVQUAL Dimensions

Dimension of Service	Expectation		Perception	
	Mean	SD	Mean	SD
Tangibles	3.63	.78	3.47	.72
Reliability	3.31	.87	3.12	.79
Responsiveness	3.35	.84	3.15	.83
Assurance	3.51	.83	3.31	.77
Empathy	3.39	.85	3.18	.77

As per part II of the questionnaire, the average mean score of students' expectations on five dimensions of service quality was 3.31 to 3.63. From the results shown in table 5.3, the most important service quality dimension for students was tangibles 3.63, followed by assurance 3.51, empathy 3.39, responsiveness 3.35 and reliability 3.31.

Part III of the questionnaire asked for students' perception on the service quality of Assumption University. The questionnaire asked the respondents to rate the same five dimensions of service quality on a scale of 1-5. It shows that the average mean score of students' perceptions on five dimensions of service quality was 3.12 to 3.47. According to table 5.3, the highest perceived service quality dimension for students was tangibles (3.47), followed by assurance (3.31), empathy (3.18), responsiveness (3.15), and reliability (3.12).

**Table 5.4:** International Students' Perceived Service Quality of Assumption

University			
Dimension of Service	Expectations (Mean Scores)	Perceptions (Mean Scores)	Perceived Service Quality (E-P)
Tangibles	3.63	3.47	0.16
Reliability	3.31	3.12	0.19
Responsiveness	3.35	3.15	0.20
Assurance	3.51	3.31	0.20
Empathy	3.39	3.18	0.21

In Table 5.4, the results show that the tangibles score was the highest score for students' expectation (3.63) followed by assurance (3.51), empathy (3.39), responsiveness (3.35) and the least expectation score was with respect to the reliability dimension with a mean of (3.31). As regards perception, students gave the highest scores to tangibles (mean 3.47), followed by assurance (mean 3.31), empathy (mean 3.18), responsiveness (mean 3.15) and reliability (mean 3.12). The mean score implied that students rated 'the appearance of the university's physical facilities, equipment, personnel and communication materials' as their highest expectation and best experience provided by the service provider (the mean score 3.63 of expectations and 3.47 for perceptions). Students rated 'the university's ability to perform the promised service dependably and accurately' as their lowest expectation (mean 3.31) and students also gave the lowest score based on their experience to the reliability dimension (mean 3.12).

Table 5.4 shows the perceived service quality when computed by comparing between the average mean of expectations and the average mean of perception. The results from this study indicated that all five dimensions scored in the positive zone.



Positive gap scores imply that service performance provided by Assumption University does not meet students' expectation because the expectations mean was more than the perceptions mean.

As the results show in table 5.4, the highest gap scores were for empathy (gap score = 0.21). This means that students expected much more in terms of the empathy dimension but the actual service received was lower than they expected. The other dimensions were assurance (gap score = 0.20), responsiveness (gap score = 0.20), reliability (gap score = 0.19) and tangibles (gap score = 0.16). Expectations of students exceeded perceptions scores for all items of service delivery in Assumption University which is reflected in the positive gap scores. The major gaps are unfavorable for empathy and most favorable for the tangibles dimension.

**Table 5.5:** Summary Statistics for Tangibles Dimensions

Measure Five items of the Tangibles Scale	Expectation		Perception	
	Mean	SD	Mean	SD
Admission requirements are clearly stated and well documented in the undergraduate catalog	3.53	.97	3.34	.92
University possesses modern facilities and equipment (buildings, classrooms)	3.71	1.00	3.56	.93
Materials associated with the university (catalogs, brochures, etc.) are usually appealing	3.51	.92	3.39	.89
University possesses up-to-date technology (computer hardware and software)	3.53	1.02	3.38	.98
University campuses are clean and visually appealing	3.84	1.00	3.69	.97
Tangibles	3.63	.78	3.47	.72

Tangibles dimension was assessed on a five-point scale from 'strongly disagree' to 'strongly agree' rating questions as shown in Table 5.5. The average mean score of students' expectations on tangibles dimension of service quality was equal to 3.63 (Standard deviation = 0.78). The four items' means were rated slightly above 3.5, which implies that the respondents agree about tangibles dimension. The highest mean that students agreed in their expectation was the last item, 'University campuses are clean and visually appealing' (mean = 3.84), the next was second item, 'University possesses modern facilities and equipment (building and classroom)', and the third item, 'Materials associated with the university (catalogs, brochures, ect.)' which scored the lowest mean.

The average mean score of students' perceptions on tangible dimensions of service quality was 3.47 (Standard deviation = 0.72). It indicated that students' perceptions on tangibles dimension was neutral. The overall mean score of students' perception was rated lower than 3.5 because of the mean scores of item 1, 3 and 4. They were rated slightly lower than 3.5 (3.34, 3.39, 3.38). Whereas, the average mean score of item 2 and 5 were rated higher than 3.5.

This indicates that students' expectations on the service quality when segmented by tangibles differ from their perceptions. Thus, the score mean of students' expectation was higher than the mean of students' perception at 0.16.

**Table 5.6** Summary Statistics for Reliability Dimensions

Measure Five items of the Reliability Scale	Expectation		Perception	
	Mean	SD	Mean	SD
Business and support staffs resolve students problems in an equitable manner	3.18	1.15	3.01	1.05
University personnel are believable, trustworthy, and honest	3.39	1.04	3.21	.99
Business and support facilities provide services as promised	3.39	.95	3.19	.97
Services are provided as promised by a Financial Aid Office	3.39	.93	3.17	.84
University records are maintained error-free	3.23	1.07	3.04	.97
Reliability	3.31	.87	3.12	.79

Reliability dimension was assessed on a five-point scale ranging from 'strongly disagree' to 'strongly agree' as shown in Table 5.6. The overall mean of students' expectations was at 3.31 (Standard deviation = 0.87), while the average mean score of students' perceptions on reliability dimensions of service quality was 3.12 (Standard deviation = 0.79). Which means that the students' expectations on the service quality when segmented by reliability differ from their perceptions. Thus, the difference mean of these two sections was 0.19.

Reliability score mean of students' expectation and perception are the lowest among five dimensions of service quality. The respondents rated them lower than 3.5

on both expectation and perception. Which means that the students rather neither agreed nor disagreed on the reliability dimension.

**Table 5.7** Summary Statistics for Responsiveness Dimensions

Measure	Expectation		Perception	
	Mean	SD	Mean	SD
<b>Six items of the Responsiveness Scale</b>				
Department faculty and staff a willingness to have students	3.39	1.00	3.24	.95
Department faculty and staff respond in a timely manner to questions and requests	3.39	1.00	3.14	1.02
Department course scheduling reflects the needs of students	3.38	.98	3.20	1.02
Required paper work that flows to department/ undergraduate school/undergraduate office is handled efficiently and in a timely manner	3.42	1.00	3.13	.96
Services associated with the registration process are handled in an efficient and effective manner	3.19	1.19	3.01	1.09
Services associated with the admission process are handled in an efficient and effective manner	3.36	1.08	3.14	1.07
Responsiveness	3.35	.84	3.15	.83

Responsiveness dimension was assessed on a five-point scale ranging from 'strongly disagree' to 'strongly agree' rating questions. The mean and standard deviation of students' expectations and perceptions construct was shown in table 5.7. The average mean score of expectation on responsiveness dimensions of service quality was equal to 3.35 (Standard deviation = 0.84), while the average mean score of students' perceptions

was 3.15 (Standard deviation = 0.83). Which means that the students neither agreed nor disagreed about the responsiveness dimension. The students tend to slightly disagree on item 5, 'Services associated with the registration process are handled in an efficient and effective manner' (mean = 3.19 and 3.01 in expectation and perception).

In addition, the students' expectations on the service quality when segmented by responsiveness differ from their perceptions as 0.20.

**Table 5.8** Summary Statistics for Assurance Dimensions

Measure Four items of the Assurance Scale	Expectation		Perception	
	Mean	SD	Mean	SD
Advisor and/or chair of committee provides adequate guidance to ensure meeting program requirements	3.42	1.01	3.21	.93
University personnel are consistently courteous (polite)	3.46	1.09	3.20	1.05
Department faculty and staff are knowledgeable when asked questions about program requirements by students	3.34	1.08	3.17	1.03
University campuses are safe and secured	3.82	1.02	3.66	.97
Assurance	3.51	.83	3.31	.77

Assurance dimension was evaluated on a five-point scale ranging from 'strongly disagree' to 'strongly agree' rating questions. The mean and standard deviation of students' expectations and perceptions construct is shown in table 5.8. Assurance score mean of students' expectations of service quality was at 3.51 (Standard deviation = 0.83) and the assurance score mean of students' perceptions was 3.31 (Standard deviation =



0.77). It shows that the students' expectations of the service quality when segmented by assurance differs from their perceptions as 0.20.

From the results shown in table 5.8, the last items' mean was rated above 3.5, which mean that the respondents agree that the university campus is safe and secure. While the students rather disagreed on the item three, 'Department faculty and staff are knowledgeable when asked questions about program requirements by students' (mean = 3.34 and 3.17 on expectation and perception, respectively).

**Table 5.9** Summary Statistics for Empathy Dimensions

Measure Six items of the Empathy Scale	Expectation		Perception	
	Mean	SD	Mean	SD
Faculty gives individual attention to students when necessary	3.45	1.03	3.26	0.98
Department staff show a sincere interest in students	3.29	1.06	3.02	1.01
University personnel deal with students in a caring fashion	3.25	1.10	3.13	1.04
Department faculty and staff have the best interest of students at heart	3.19	1.17	2.99	1.06
University computers are assessable and available for students use at convenient hours	3.39	1.13	3.21	1.03
University libraries have convenient hours	3.77	1.06	3.48	1.06
Empathy	3.39	.85	3.18	.77

The Empathy dimension was assessed on a five-point scale from 'strongly disagree' to strongly agree'. The mean and standard deviation of students' expectations



and perceptions are shown in table 5.9. The Empathy dimension score mean of students' expectation was equal to 3.39 (Standard deviation = 0.85), and the empathy score mean of students' perceptions was 3.18 (Standard deviation = 0.77). It shows that the students' expectations on the service quality when segmented by empathy differ from their perceptions as 0.21. Most questions were rated slightly lower than 3.5, which means that the students neither agreed nor disagreed about empathy. Only the item, 'University libraries have convenient hours' in expectation was rated slightly more than 3.5 (mean = 3.77), which mean that the students slightly agreed in this item. Most items in perception were rated lower than 3.5, especially, the item, 'Department faculty and staff have the best interest of students at heart' was rated at 2.99. Thus, the empathy dimension score mean of students' perception was 3.18, which is lower than 3.5.

### 5.3 Hypotheses Testing

This research focused on the undergraduate international students' expectations and the perceptions of service quality provided by Assumption University. The hypotheses statements as indicated in chapter 3, consisted of seven hypotheses.

**Table 5.10:** Paired-Sample T Test in terms of tangibles, reliability, responsiveness, assurance, and empathy dimensions.

			Paired-Sample t test	
	Expected	Perceived	t statistic	p-value
(H1) Tangibles	3.63	3.47	4.007	.00*
(H2) Reliability	3.31	3.12	4.326	.00*
(H3) Responsiveness	3.35	3.15	4.635	.00*
(H4) Assurance	3.51	3.31	4.938	.00*
(H5) Empathy	3.39	3.18	5.123	.00*

### **Test of Hypothesis 1**

Ho1: There is no difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of tangibles.

Ha1: There is a difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of tangibles.

The null hypothesis was evaluated by using the paired-sample t test to test for significant differences between students' expectation and perception of Assumption University on service quality in terms of tangibles.

The result in table 5.10 show that the p-value of the t-test of tangibles dimension = 0.00, which is less than the significance level of 0.05. This means that the null hypothesis has been rejected for Ho1.

Therefore there is a difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of tangibles dimension.

### **Test of Hypothesis 2**

Ho2: There is no difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of reliability.

Ha2: There is a difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of reliability.

The null hypothesis was evaluated by using the paired-sample t test to test the significant difference between students' expectation and perception of Assumption University on service quality in terms of reliability.

The results in table 5.10 showed that the p-value of the t-test of reliability dimension = 0.00, which is less than the significance level of 0.05. This means that the null hypothesis has been rejected for Ho2.

Therefore, there is a difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of reliability dimension.

### **Test of Hypothesis 3**

Ho3: There is no difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of responsiveness.

Ha3: There is a difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of responsiveness.

The null hypothesis was evaluated by using the paired-sample t test to test the significant difference between students' expectation and perception of Assumption University on service quality in terms of responsiveness.

The result in table 5.10 showed that the p-value of the t-test of responsiveness dimension = 0.00, which is less than the significance level of 0.05. This means that the null hypothesis has been rejected for Ho3.

Therefore, there is a difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of responsiveness dimension.

#### **Test of Hypothesis 4**

Ho4: There is no difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of assurance.

Ha4: There is a difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of assurance.

The null hypothesis was evaluated by using the paired-sample t test to test the significance difference between students' expectation and perception of Assumption University on service quality in terms of assurance.

The result in table 5.10 showed that the p-value of the t-test of assurance dimension = 0.00, which is less than the significance level of 0.05. This means that the null hypothesis has been rejected for Ho4.

Therefore, there is a difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of assurance dimensions.

#### **Test of Hypothesis 5**

Ho5: There is no difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of empathy.

Ha5: There is a difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of empathy.

The null hypothesis was evaluated by using the paired-sample t test to test the significant difference between students' expectation and perception of Assumption University on service quality in terms of empathy.

The result in table 5.10, the p-value of the t-test of empathy dimension = 0.00, which is less than the significance level of 0.05. This means that the null hypothesis has been rejected for Ho5.

Therefore, there is a difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of empathy dimension.

**Test of Hypothesis 6: which consisted of 15 sub-hypotheses:**

Ho6: There is no difference in undergraduate international students' expectation of service quality under different demographic factors (Gender, Age and Geographic area).

Ha6: There is a difference in undergraduate international students' expectation of service quality under different demographic factors (Gender, Age and Geographic area).

**Table 5.11:** Independent Samples Test for the Difference in Students' Expectations of Service Quality based on Different Genders (sub-hypothesis of Ho6)

	Gender		Independent-Samples t-test	
	Male	Female	t statistic	p-value
(H6:a1) Expected Tangibles	3.54	3.70	-1.997	.047
(H6:b1) Expected Reliability	3.25	3.38	-1.451	.148
(H6:c1) Expected Responsiveness	3.32	3.38	-.709	.479
(H6:d1) Expected Assurance	3.49	3.53	-.419	.675
(H6:e1) Expected Empathy	3.37	3.41	-.417	.677

Table 5.11 has shown the hypotheses testing the significant difference for H6:a1- 'expectation on tangibles dimension' on service quality of Assumption University by using independent samples t-test.

The result indicated a significance of 0.047, which was less than 0.05. This mean that the null hypothesis Ho6:a1 has been rejected in tangibles dimension. However, the null hypothesis was failed to reject in Ho6:b1-e1, which shows there are no differences between students' expectations in reliability, responsiveness, assurance, and empathy dimensions on service quality of Assumption University.



Therefore the conclusion is there is no difference in undergraduate international students' expectations of service quality in reliability, responsiveness, assurance, and empathy dimensions based on different genders. However, there is a significant difference in undergraduate international students' expectations of service quality in tangibles dimension under different genders.

**Table 5.12:** Analysis of Variance for the Difference in Students' Expectation of Service Quality when Segmented by Age (sub-hypothesis of Ho6)

	Age in years			ANOVA	
	≤ 20	20 – 22	≥ 23	F	p-value
(H6:a2) Expected Tangibles	3.64	3.65	3.58	.30	.739
(H6:b2) Expected Reliability	3.20	3.40	3.19	2.65	.072
(H6:c2) Expected Responsiveness	3.28	3.42	3.25	1.73	.179
(H6:d2) Expected Assurance	3.42	3.58	3.40	2.03	.133
(H6:e2) Expected Empathy	3.24	3.48	3.26	3.03	.050

The null hypotheses was evaluated by using one-way analysis of variance (ANOVA) to test the significant difference in undergraduate international students' expectations of service quality under different demographic factors based on different age levels. The age levels which consisted of 3 variables included under 20 years old, 20-22 years old and 23 years old and above.

Table 5.12, shows H6:a2-d2. The students who were aged between 20-22 years old and under 20 years old showed higher expectations in tangibles, reliability, responsiveness and assurance than those aged 23 years old and above. H6:e2, the students aged under 20 years old and aged 23 years old and above had lower expectations

than those between 20-22 years old. Students with ages between 20-22 years old showed the highest expectation scores (3.65, 3.40, 3.42, 3.58 and 3.48, respectively).

The result in table 5.12 indicated that at the 0.05 significance level, the expectations of service are not different between these 3 groups of age levels since the 2-tailed significance exceeded 0.05. This means that the null hypothesis was failed to reject (Ho6:a2-e2). Therefore, the conclusion was there is no difference in undergraduate international students' expectation of service quality under different demographic factors based on different age levels.

**Table 5.13:** Analysis of Variance for the Difference in Students' Expectation of Service Quality when Segmented by Geographic Area (sub-hypothesis of Ho6)

	Geographic Area				ANOVA	
	African	Asian	European	North American	F	p-value
(H6:a3) Expected Tangibles	4.10	3.61	3.79	3.60	.529	.662
(H6:b3) Expected Reliability	3.70	3.30	3.42	3.73	.479	.697
(H6:c3) Expected Responsiveness	3.67	3.34	3.49	3.56	.328	.805
(H6:d3) Expected Assurance	3.75	3.49	3.67	4.25	1.11	.347
(H6:e3) Expected Empathy	3.42	3.38	3.36	3.94	.434	.729

The null hypotheses was evaluated by using one-way analysis of variance (ANOVA) to test the significant difference in undergraduate international students'

expectations of service quality under different demographic factors based on different geographic area.. Geographic areas consisted of 4 variables, included African, Asian, European and North American.

According to H6:a3, African students (4.10) have the highest expectation in tangibles dimension. Next, are the European students (3.79), Asian students (3.61) and North American students (3.60).

H6:b3, North American students (3.73) have the highest expectation in reliability dimension. Next, are African students (3.70), European students (3.42) and Asian students (3.30).

H6:c3, African students (3.67) have the highest expectation in responsiveness dimension. Next, are the North American students (3.56), European students (3.49) and Asian students (3.60).

H6:d3, North American students (4.25) have the highest expectation in assurance dimension. Next, are the African students (3.75), European students (3.67) and Asian students (3.49).

H6:e3, North American students (3.94) have the highest expectation in empathy dimension. Next, are the African students (3.42), Asian students (3.38) and European students (3.36).

The results in table 5.13 indicated that at the 0.05 significance level, the expectations of service are not different between these 4 groups of nationalities since the 2-tailed significance exceeded 0.05. This means that the null hypothesis was failed to reject (Ho6:a3-e3). Therefore, the conclusion was there is no difference in undergraduate

international students' expectations of service quality under different demographic factors based on different geographic area.

**Tests of Hypothesis 7: which consisted of 15 sub-hypotheses.**

Ho7: There is no difference in undergraduate international students' perception of service quality under different demographic factors (Gender, Age and Geographic area).

Ha7: There is a difference in undergraduate international students' perception of service quality under different demographic factors (Gender, Age and Geographic area).

**Table 5.14:** Independent Samples Test for the Difference in Students' Perception of Service Quality based on Different Genders (sub-hypothesis of Ho7)

	Gender		Independent-Samples t test	
	Male	Female	t statistic	p-value
(H7:a1) Perceived Tangibles	3.42	3.52	-1.295	.196
(H7:b1) Perceived Reliability	3.17	3.08	1.134	.258
(H7:c1) Perceived Responsiveness	3.17	3.12	.531	.595
(H7:d1) Perceived Assurance	3.35	3.27	.985	.325
(H7:e1) Perceived Empathy	3.23	3.13	1.199	.231

Null hypotheses 7 (Ho7) stated that there is no difference in undergraduate international students' perception of service quality under different demographic factors based on different genders.

The results in table 5.14 indicated that at the 0.05 significant level, the perceptions of service are not different between these 2 groups of gender since the 2-tailed significance of 0.196, 0.258, 0.595, 0.325 and 0.231 , which was greater than 0.05. This means that the null hypothesis was failed to reject (Ho7:a1-e1). Therefore, the conclusion was there is no difference in undergraduate international students' perception of service quality under different demographic factors based on different genders.

**Table 5.15:** Analysis of Variance for the Difference in Students' Perception of Service Quality when Segmented by Age Levels (sub-hypothesis of Ho7)

	Age in years			ANOVA	
	≤ 20	20 – 22	≥ 23	F	p-value
(H7:a2) Perceived Tangibles	3.16	3.53	3.47	4.32	.014*
(H7:b2) Perceived Reliability	2.81	3.19	3.10	4.14	.017*
(H7:c2) Perceived Responsiveness	2.94	3.21	3.09	2.15	.118
(H7:d2) Perceived Assurance	3.10	3.37	3.27	2.34	.098
(H7:e2) Perceived Empathy	2.95	3.27	3.10	3.79	.023*

The null hypothesis was evaluated by using one-way analysis of variance (ANOVA) to test the significance difference between international students' perception of service quality under different demographic factors when segmented by age levels.

Table 5.15, H7:a2-e2, the students who were aged between 20-22 years old and 23 years old and above had higher scores on the perception of the five dimensions than

those aged under 20 years old. Students aged between 20-22 years old perceived the highest in five dimensions (3.53, 3.19, 3.21, 3.37 and 3.27, respectively).

The result in table 5.15 indicated a 2-tailed significance of 0.14 (tangibles), 0.17 (reliability) and 0.23 (empathy), which was less than 0.05. This means that the null hypothesis was rejected (Ho7:a2, b2 and e2). The significance of 0.118 (responsiveness) and 0.98 (assurance) exceeded 0.05, this means that the null hypothesis was failed to reject (Ho7:c2 and d2).

**Table 5.16:** Analysis of Variance for the Difference in Students’ Perception of Service Quality when Segmented by Geographic Area (sub-hypothesis of Ho7)

	Geographic Area				ANOVA	
	African	Asian	European	North American	F	p-value
(H7:a3) Perceived Tangibles	4.30	3.48	3.47	2.20	4.08	.007*
(H7:b3) Perceived Reliability	3.40	3.13	3.01	2.47	.917	.433
(H7:c3) Perceived Responsiveness	4.00	3.16	2.89	2.72	1.57	.196
(H7:d3) Perceived Assurance	4.25	3.31	3.24	3.17	1.09	.354
(H7:e3) Perceived Empathy	3.58	3.19	2.98	2.89	.745	.52

The null hypothesis was evaluated by using one-way analysis of variance (ANOVA) to test the significant difference between international students’ perception of service quality under different demographic factors when segmented by geographic area.



According to H6:a3-d3, the findings indicated that North American students perceived the service quality in five dimensions the least, while African students have the highest perception on all five dimensions.

The result in table 5.16 indicated a 2-tailed significance of 0.007 (tangibles), which was less than 0.05. This means that the null hypothesis was rejected (Ho7:a3). While the significance of 0.433 (reliability), 0.196 (responsiveness), 0.354 (assurance) and 0.52 (empathy) exceeded 0.05, this means that the null hypothesis was failed to reject (Ho7:b3, c3, d3 and e3).

**Table 5.17:** Summary Results from Hypotheses Testing

Hypotheses	Level of Significant	Results
Ho1: There is no difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of tangibles.	0.00	Reject Ho
Ho2: There is no difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of reliability.	0.00	Reject Ho
Ho3: There is no difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of responsiveness.	0.00	Reject Ho

Ho4: There is no difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of assurance.	0.00	Reject Ho
Ho5: There is no difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of empathy.	0.00	Reject Ho
Ho6:a1-e1: There is no difference in undergraduate international students' expectation of service quality under different demographic factors (segmented by gender).	(a1)Tangibles = 0.047 (b1)Reliability = 0.148 (c1)Responsiveness = 0.479 (d1)Assurance = 0.675 (e1)Empathy = 0.677	Reject Ho6:a1  Failed to reject Ho6:b1-e1
Ho6:a2-e2: There is no difference in undergraduate international students' expectation of service quality under different demographic factors (segmented by age levels).	(a2)Tangibles = 0.739 (b2)Reliability = 0.072 (c2)Responsiveness = 0.179 (d2)Assurance = 0.133 (e2)Empathy = 0.050	Failed to reject Ho6:a2-e2

Ho6:a3-e3: There is no difference in undergraduate international students' expectation of service quality under different demographic factors (segmented by geographic area).	(a3)Tangibles = 0.662 (b3)Reliability = 0.697 (c3)Responsiveness = 0.805 (d3)Assurance = 0.347 (e3)Empathy = 0.729	Failed to reject Ho6:a3-e3
Ho7:a1-e1: There is no difference in undergraduate international students' perception of service quality under different demographic factors (segmented by gender)	(a1)Tangibles = 0.196 (b1)Reliability = 0.258 (c1)Responsiveness = 0.595 (d1)Assurance = 0.325 (e1)Empathy = 0.231	Failed to reject Ho7:a1-e1
Ho7:a2-e2: There is no difference in undergraduate international students' perception of service quality under different demographic factors (segmented by age levels).	(a2)Tangibles = 0.14* (b2)Reliability = 0.17* (c2) Responsiveness = 0.118 (d2) Assurance = 0.098 (e2) Empathy = 0.023*	Rejected Ho7:a2* Rejected Ho7:b2* Failed to reject Ho7:c2 Failed to reject Ho7:d2 Rejected Ho7:e2*

Ho7:a3-e3: There is no difference in undergraduate international students' perception of service quality under different demographic factors (segmented by geographic area).	(a3)Tangibles = 0.007*	Rejected Ho7:a3*
	(b3)Reliability = 0.433	Failed to reject Ho7:b3
	(c3)Responsiveness = 0.196	Failed to reject Ho7:c3
	(d3)Assurance = 0.354	Failed to reject Ho7:d3
	(e3)Empathy = 0.52	Failed to reject Ho7:e3

Table 5.17 indicates that the students' expectations vary from their perceptions on the service quality provided by Assumption University when they are segmented into five dimensions (tangibles, reliability, responsiveness, assurance and empathy). On the other hand, the overall demographic profile of the students segmented by gender, age and geographic area have no influence on the international students' expectations. From table 5.17 it can be seen that the international students' perception are significant different when segmented by age levels in terms of tangibles, reliability and responsiveness and segmented by geographic area in terms of tangibles.

## CHAPTER 6

### SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

The major objective of this study focused on the level of international students' perceived service quality of Assumption University. The purpose of this chapter is to analyze and summarize the results obtained in chapter 5. This chapter is comprised of four parts. The first part presents the summary of the findings. The study's limitations and conclusion are delineated in the second part. The recommendations for the organization in order to improve its service quality and results obtained from this study are discussed in the third part. The last part included in this chapter, offers suggestions for further research. The contents are divided into four sections as follows:

6.1 Summary of the Findings

6.2 Discussion/Conclusions

6.3 Recommendations

6.4 Further Research

#### 6.1 Summary of Findings

This study has the objective of examining the five dimensions of service quality provided by Assumption University. The SERVQUAL instrument was used as the instrument for data collection in the survey. This instrument is based on five dimensions expounded by Parasuraman et.al. (1990), which included tangibles, reliability, responsiveness, assurance and empathy. The study was designed to test the demographic characteristics including gender, age and geographic area that influenced the overall

expectations and perceptions. Results obtained from this study indicate that there are some differences between expected and perceived service quality of undergraduate international students of Assumption University in terms of five dimensions based on different genders, age levels and geographic area.

### **The result of hypotheses testing**

Seven hypotheses proposed in this study were supported by the data as seen in Chapter 5. The data analyses and finding are elaborated as follows:

Research Question1-5: What is the difference between expected and perceived service quality of undergraduate international students of Assumption University in terms of tangibles, reliability, responsiveness, assurance and empathy?

The paired-sample T Test in table 5.10 and table 5.4, indicated that the students' expectation towards service quality of Assumption University when segmented by tangibles, reliability, responsiveness, assurance and empathy differ from their perceptions as the results show that the p-value of the t-test of five dimensions = 0.00, were less than the significance level of 0.05. The results in table 5.4 show that the mean score of the students' expectation was 3.63 while the mean score of the students' perception was 3.47 with a difference of 0.16 in terms of tangibles, the mean score of students' expectation was 3.31 while the mean score of the students' perception was 3.12 with a difference of 0.19 for reliability. The mean score of students' expectation was 3.35 while the mean score of the students' perception was 3.15 with a difference of 0.20 for responsiveness. The mean score of students' expectation was 3.51 while the mean score of the students' perception was 3.31 with a difference of 0.20 in terms of assurance. The mean score of



students' expectation was 3.39 while the mean score of the students' perception was 3.18 with a difference of 0.21 in terms of empathy.

Research Question 6: What is the difference in undergraduate international students' expectation of service quality under different demographic factors?

Hypothesis 6 was evaluated by independent samples t-test and analysis of variance (ANOVA) for the difference in students' expectations on five dimensions of service quality:

- Based on different genders in table 5.11, independent samples t-test show that there is a significant difference only for expectations on tangibles dimension on service quality of Assumption University. The result indicated a significance of 0.047, which was less than 0.05. While there is no difference in reliability (0.148), responsiveness (0.479), assurance (0.675), and empathy (0.677) dimensions on service quality of Assumption University.
- Based on different age groups as shown in table 5.12, the analysis of variance indicated that there is no difference in the students' expectations on five dimensions of service quality under different demographic characteristics when segmented by age groups. The p-value shown in table 5.12 indicated a significance of 0.739 (tangibles), 0.072 (reliability), 0.179 (responsiveness), 0.133 (assurance) and 0.050 (empathy), which exceeded 0.05.
- Based on different geographic area as shown in table 5.13, the analysis of variance indicated that there is no difference in the students' expectation

of five dimensions of service quality under different demographic characteristics when segment by geographic area. The p-value shown in table 5.13 indicated a significance of 0.662 in tangibles dimension, 0.697 in reliability dimension, 0.805 in responsiveness dimension, 0.347 in assurance dimension and 0.729 in empathy dimension, which exceeded 0.05.

Research Question 7: What is the difference in undergraduate international students' perception of service quality under different demographic factors?

Hypothesis 7 was evaluated by independent samples t-test and analysis of variance to measure the difference in students' perception of five dimensions on service quality:

- Based on different genders as shown in table 5.14, independent samples t-test indicated no differences on five dimensions of service quality. The results indicated a significance of 0.196 in tangibles, 0.258 in reliability, 0.595 in responsiveness, 0.325 in assurance and 0.231 in empathy, which were greater than 0.05.
- Based on different age groups as shown in table 5.15, the analysis of variance indicated no differences in the students' perception of responsiveness and assurance dimensions of service quality under different demographic characteristics when segmented by age groups. The results in table 5.15 showed a significance of 0.118 (responsiveness), and 0.098 (assurance), whereas there are significance differences in the

student's perception of tangibles, reliability and empathy dimensions as 0.014, 0.017 and 0.023 respectively, which were less than 0.05.

- Based on different geographic area as shown in table 5.16, the analysis of variance (ANOVA) indicated that there is a significance difference in the students' perception of tangibles dimensions of service quality under different demographic characteristics when segment by geographic area. The p-value was 0.007 that less than 0.05, whereas the p-value of reliability (0.433), responsiveness (0.196), assurance (0.354) and empathy (0.52) exceeded 0.05. This implies no difference in the students' perception when segmented by geographic area.

## **6.2 Discussion/Conclusions**

This research is the first to attempt to apply empirical analysis using the SERVQUAL measurement with respect to undergraduate international students satisfaction in Assumption University. As the findings show, the gaps between expectations and perceptions of undergraduate international students do exist. The highest gap score is empathy dimension, implying that the students perceived the service quality of the university less than they expected. The lowest gap is tangibles, it showed that the students perceived that the university's physical facilities, equipment, personnel and communication materials as their highest expectation and the university could satisfy them where these factors were concerned.

Based on the demographic profile of the students, when segmented by gender, age levels and geographic area, the results showed that the students' expectations were different in tangibles dimensions when segmented by gender, and they also perceived

differences in service quality in different age levels for the dimensions of tangibles, reliability and empathy. Students of different geographic area also showed differences in their perception of the tangibles dimension.

From the results of the study, the researcher concludes that the service delivery provided by Assumption University does not fulfill the expectations of students.

This research also indicates that students' satisfaction depends on perceived service quality. Perceived service quality, has an influence on student satisfaction. A student who has perceived better quality service delivery is more satisfied with his or her university. However, the main focus of university attention should be on students' satisfaction, of which service quality is an important antecedent. Therefore, when developing strategies to increase the number of international students, the needs of the students should be taken into consideration focusing on student satisfaction that comes as a result of good service quality.

The findings of this study support those of Kitcharoen (1999) who studied the service quality of administrative units under the Office of Graduate Schools of Assumption University. His research aimed to study the student's expectations, perceptions and satisfactions on service quality offered by the Office of Graduate Schools. The findings of this research showed that, in the opinion of graduate students, the Office of Graduate Schools was delivering low quality services to them and they expected the university and the office to improve the quality of services offered to them.

Another study conducted by Mustafa (2002) on the expectations versus experiences of MBA students of the University of Dhaka, Bangladesh, also show similar findings. The result of the study concluded that there were no differences between MBA

student's age, gender, working experience, occupation and income and their overall satisfaction, however, there were gaps between expectations and perceptions on every dimension of the SERVQUAL instrument used.

Kingphakorn (2003) who studied user expectations and perceptions about service quality of St. Gabriel's Library of Assumption University, also employed the SERVQUAL model. The result of her study has also shown that there were statistically significant difference between user expectations and perceptions of service delivered by St. Gabriel's Library in all five dimensions.

### 6.3 Recommendations

In a university, service quality is an important driver of customer satisfaction. This is of particular importance to the university as a guideline to improve the service quality as well as to exist in a growing climate of increasing competition for student populations. Based on the findings, the researcher offers recommendations for improving the service quality of Assumption University in each of the five dimensions of service quality.

**Tangibles dimension:** The tangibles dimension on perceived service quality, indicate that tangibles, such as physical evidence of the service physical facilities, appearance of personnel, tools or equipment used to provide the service, and physical representations of the service. As the results in table 5.3, the overall students' expectation was greater than students' perception. This dimension also obtained the highest score indicating that students were concerned with it more than other factors. While the university has updated and maintained its buildings and classrooms, other services, such as well-equipped modern computer labs should be provided to the students



and up-to-date computer hardware and software. Moreover, these should be adequate in number given the growing body of undergraduate students.

**Reliability dimension:** Reliability involves consistency of performance and dependability, such as the university has to perform the service right the first time as well as honor its promises. The outcome indicates that this dimension has the lowest satisfaction score. Therefore, the university should emphasize this dimension in order to satisfy students by performing good service the first time and providing good service at the promised time. Staffs have to help students to solve the problems in an equitable manner. In addition, the university records should be developed and maintained for quick access.

**Responsiveness dimension:** Responsiveness concerns the willingness or readiness of faculties and staffs to help students and to provide prompt service, such as timeliness of service, and concentrate on providing prompt service. The university should provide prompt service such as the faculties and staffs should be available to provide the service as and when required. The staffs must be trained to have a positive attitude be helpful, friendly, and sincere to the students. Furthermore, staffs should be willing to help students and respond to students' request promptly.

**Assurance dimension:** Assurance means the knowledge and courtesy of employees and their ability to convey trust and confidence. This dimension scored the second highest rank which indicated students' concern. Hence, the university should have trustworthy, polite and kind staffs who can help their students in every situation and provide training to the staffs so that they can communicate in English with international students. Therefore, the staffs should have knowledge and skills in order to provide the



best service, to answer students and to develop students' confidence and trust in their service. Moreover, the university campus has to be a safe and secure place for students.

**Empathy dimension:** Last but not least, empathy involves provision of caring, individualized attention, which the university provides its students. Faculties should provide individual attention to students when necessary and have advising hours convenient to students. And faculties and staffs should understand the students' needs as per their specific requirements, recognize behavior of individual students and provide them with individualized attention as much as possible. In addition, the university needs to provide convenient hours of operation and location of service facilities, such as university computers and university libraries.

#### **Demographic Characteristics**

The results indicated differences in expectations and perceptions when segmented by demographic characteristics of international students on five dimensions of service quality. It can be concluded that the need of international students, and the decision-making process of each group of students, are dissimilar. It is recommended that the university needs to first survey the different student segments in order to narrow or close the expectation gap, so as to improve and increase performance of service quality to meet the students' expectation and support the demand of the students. Misconceptions and differences in expectations will persist unless effective and timely solutions are implemented.

Finally, the study indicates that the university should be aware of various factors that impact students' expectations and perceptions on service quality. As an international university, and as the first one in Thailand, Assumption University ought to pay attention

to the needs of international students, in order to sustain its strong position in terms of providing international educational services in the global market.

#### **6.4 Further Research**

Further research should focus on particular choices of international education, and identify what factors can influence each choice. Focusing on a select group of influencing factors in depth could elicit more meaningful results than the superficial study of a whole list of influencing factors.

This study was limited to only undergraduate international students of Assumption University and demonstrated the delineation between expected and perceived service quality, and student satisfaction. Further studies can be conducted for other universities that provided international programs in Thailand. The ability to draw similar conclusions to other students in other years of education, types of education, or geographic locations is also recommended

In addition, evaluations of educational quality by other important stakeholders such as educators, employers, and the public would also provide better insights for implementing university mission and strategy.

It is also not known whether the set of five dimensions of service quality is exhaustive in the field of education. Although the model explains student satisfaction with their education, there still may be other dimensions that have been missed. For example, it can be argued that it is more important to assess the outcome of services (e.g., skills developed, extent of learning).

Finally, another important dimension of education, curriculum, was not addressed in this study. Research which included this aspect would be very beneficial.

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**APPENDIX A**

**QUESTIONNAIRE**



## QUESTIONNAIRE

I am a MBA student of Assumption University, Bangkok studying about the undergraduate international students perception toward service quality of Assumption University.

Please kindly take a few minutes to answer all of questions below. This information is for research purposes only and will be treated with the strictest confidence and will not be made available to any third party.

Thank you very much for your co-operation.

➤ Which year are you currently enrolled?

☐ Sophomore      ☐ Junior      ☐ Senior

### Part I: Demographic Profile

Please mark x in the ( ) for the answer.

1. Gender      ( ) Male      ( ) Female

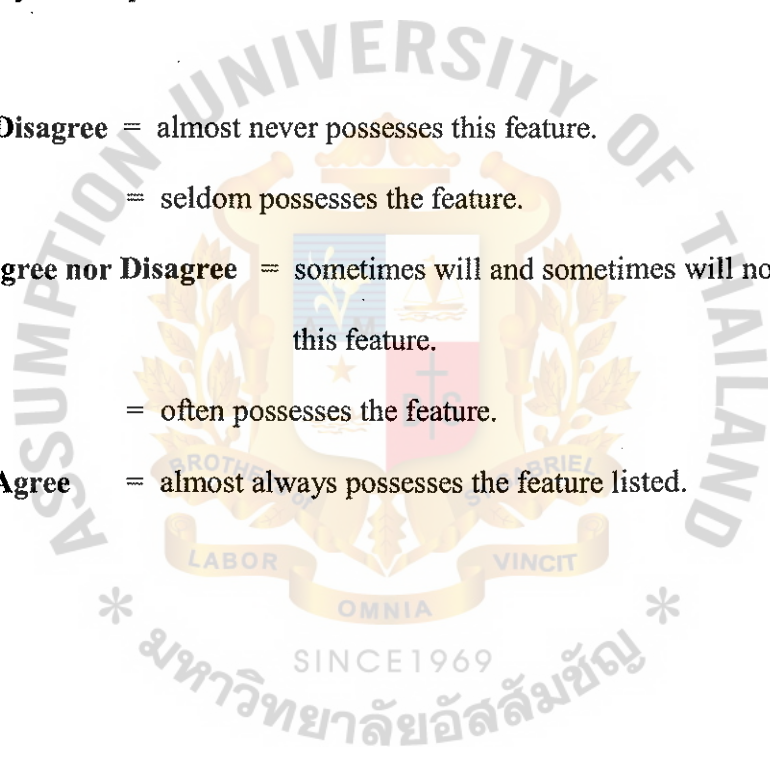
2. Age      ( ) under 20 years old  
              ( ) 20-22 years old  
              ( ) 23 years old and above

3. Geographic Area

( ) African .....(please fill in country)  
( ) Asian .....(please fill in country)  
( ) European .....(please fill in country)  
( ) North American .....(please fill in country)  
( ) Others .....(please fill in country)

## **Part II: Expectation**

This survey asks your opinion about the delivery of services to undergraduate international students. Please indicate the extent to which you think your university should possess the feature described by each statement. Do this by circling one of five numbers to the right of each statement. There are no right or wrong answers. I am only interested in the number that best represents your expectation about the level of service(s) your university should provide.

- 
- 1 **Strongly Disagree** = almost never possesses this feature.
- 2 **Disagree** = seldom possesses the feature.
- 3 **Neither Agree nor Disagree** = sometimes will and sometimes will not possess this feature.
- 4 **Agree** = often possesses the feature.
- 5 **Strongly Agree** = almost always possesses the feature listed.

(Expectations)

	Strongly disagree			Strongly agree	
	1	2	3	4	5
1. Admission requirements are clearly stated and well documented in the undergraduate catalog.	1	2	3	4	5
2. University possesses modern facilities and equipment (buildings, classrooms).	1	2	3	4	5
3. Materials associated with the university (catalogs, brochures, etc.) are usually appealing.	1	2	3	4	5
4. University possesses up-to-date technology (computer hardware and software).	1	2	3	4	5
5. University campuses are clean and visually appealing.	1	2	3	4	5
6. Business and support staffs resolve students' problems in an equitable manner	1	2	3	4	5
7. University personnel are believable, trustworthy, and honest.	1	2	3	4	5
8. Business and support facilities provide services as promised.	1	2	3	4	5
9. Services are provided as promised by a Financial Aid Office.	1	2	3	4	5
10. University records are maintained error-free.	1	2	3	4	5

(Expectations Continued)

	Strongly disagree			Strongly agree	
	1	2	3	4	5
11. Department faculty and staff a willingness to have students.					
12. Department faculty and staff respond in a timely manner to questions and requests.	1	2	3	4	5
13. Department course scheduling reflects the needs of students.	1	2	3	4	5
14. Required paper work that flows to department/ undergraduate school/undergraduate office is handled efficiently and in a timely manner.	1	2	3	4	5
15. Services associated with the registration process are handled in an efficient and effective manner.	1	2	3	4	5
16. Services associated with the admission process are handled in an efficient and effective manner.	1	2	3	4	5
17. Advisor and/or chair of committee provides adequate guidance to ensure meeting program requirements.	1	2	3	4	5
18. University personnel are consistently courteous (polite).	1	2	3	4	5

(Expectations Continued)

	Strongly disagree			Strongly agree	
19. Department faculty and staff are knowledgeable when asked questions about program requirements by students.	1	2	3	4	5
20. University campuses are safe and secured.	1	2	3	4	5
21. Faculty gives individual attention to students when necessary.	1	2	3	4	5
22. Department staff show a sincere interest in students.	1	2	3	4	5
23. University personnel deal with students in a caring fashion.	1	2	3	4	5
24. Department faculty and staff have the best interest of students at heart.	1	2	3	4	5
25. University computers are assessable and available for students' use at convenient hours.	1	2	3	4	5
26. University libraries have convenient hours.	1	2	3	4	5



### **Part III: Perception / Experiences**

The following set of statements relate to your experience as students while attending your university. For each statement, please show the extent to which you believe your university has demonstrated the feature described.

	Strongly disagree			Strongly agree	
	1	2	3	4	5
1. Admission requirements are clearly stated and well documented in the undergraduate catalog.					
2. University possesses modern facilities and equipment (buildings, classrooms).					
3. Materials associated with the university (catalogs, brochures, etc.) are usually appealing.					
4. University possesses up-to-date technology (computer hardware and software).					
5. University campuses are clean and visually appealing.					
6. Business and support staffs resolve students' problems in an equitable manner.					
7. University personnel are believable, trustworthy, and honest.					
8. Business and support facilities provide services as promised.					

(Perceptions/Experiences Continued)

	Strongly disagree		Strongly agree		
	1	2	3	4	5
9. Services are provided as promised by a Financial Aid Office.	1	2	3	4	5
10. University records are maintained error-free.	1	2	3	4	5
11. Department faculty and staff a willingness to have students.	1	2	3	4	5
12. Department faculty and staff respond in a timely manner to questions and requests.	1	2	3	4	5
13. Department course scheduling reflects the needs of students.	1	2	3	4	5
14. Required paper work that flows to department/ undergraduate school/undergraduate office is handled efficiently and in a timely manner.	1	2	3	4	5
15. Services associated with the registration process are handled in an efficient and effective manner.	1	2	3	4	5
16. Services associated with the admission process are handled in an efficient and effective manner.	1	2	3	4	5

(Perceptions/Experiences Continued)

	Strongly disagree			Strongly agree	
17. Advisor and/or chair of committee provides adequate guidance to ensure meeting program requirements.	1	2	3	4	5
18. University personnel are consistently courteous (polite).	1	2	3	4	5
19. Department faculty and staff are knowledgeable when asked questions about program requirements by students.	1	2	3	4	5
20. University campuses are safe and secured.	1	2	3	4	5
21. Faculty gives individual attention to students when necessary.	1	2	3	4	5
22. Department staff show a sincere interest in students.	1	2	3	4	5
23. University personnel deal with students in a caring fashion.	1	2	3	4	5
24. Department faculty and staff have the best interest of students at heart.	1	2	3	4	5
25. University computers are assessable and available for students' use at convenient hours.	1	2	3	4	5
26. University libraries have convenient hours.	1	2	3	4	5

**APPENDIX B**

**INTERNATIONAL PROGRAMS**

**OF**

**PUBLIC HIGHER EDUCATION INSTITUTIONS**

**AND**

**PRIVATE HIGHER EDUCATION INSTITUTIONS**



## International Programs

### Undergraduate Programs

#### Public Higher Education Institutions

University/Faculty	Disciplines	Degree granted
<b>Burapha University</b>		
International College	• Aquatic Science	B.Sc.
	• Computer Science	B.Sc.
	• Food Science	B.Sc.
	• Hospitality Management	B.B.A.
	• Marketing	B.B.A.
	• Management	B.B.A.
	• Human Resource Development (Communication Skills)	B.A.
	• Nursing Science	B.N.S.
		(Continued Program)
<b>Chiang Mai University</b>		
Faculty of Engineering	• Mechanical Engineering	B.Eng.
Faculty of Nursing	• Nursing Science	B.N.S.

University/Faculty	Disciplines	Degree granted
<b>Chulalongkorn University</b>		
Faculty of Commerce and Accountancy	<ul style="list-style-type: none"> <li>Accounting</li> <li>International Business Management</li> </ul>	B.B.A. B.B.A.
Faculty of Economics	<ul style="list-style-type: none"> <li>Economics</li> </ul>	B.A.
Sasin Graduate Institute of Business Administration	<ul style="list-style-type: none"> <li>Senior Executive Program</li> </ul>	Cert.
<b>Kasetsart University</b>		
Faculty of Engineering	<ul style="list-style-type: none"> <li>Electromechanic Manufacturing Engineer</li> <li>Industrial Engineering</li> <li>Mechanical Engineering</li> <li>Software and Knowledge Engineering</li> </ul>	B.Eng. (Electromechanic Manufacturing Engineering) B.Eng. (Industrial Engineering) B.Eng. (Mechanical Engineering) B.Eng. (Software and Knowledge Engineering)



University/Faculty	Disciplines	Degree granted
	<ul style="list-style-type: none"> <li>Double Degree Program</li> </ul>	B.Eng.
	Aerospace Engineering and	(Aerospace
	Business Administration	Engineering) and
		B.B.A. (Business
		Administration)
Faculty of Agriculture	<ul style="list-style-type: none"> <li>Double Degree Program Tropical</li> </ul>	B.S. (Tropical
	Agriculture and International	Agriculture) and
	Trade	B.A.
		(International
		Trade)
	<ul style="list-style-type: none"> <li>Double Degree Program Tropical</li> </ul>	B.S. (Tropical
	Agriculture and International	Agriculture) and
	Trade	B.B.A.
		(International
		Trade)
King Mongkut's Institute		
of Technology	<ul style="list-style-type: none"> <li>Petrochemistry</li> </ul>	B.Sc.
Ladkrabang	<ul style="list-style-type: none"> <li>Polymer Science and</li> </ul>	B.Sc.
Faculty of Science	Technology	
	<ul style="list-style-type: none"> <li>Computer Science</li> </ul>	B.Sc.

University/Faculty	Disciplines	Degree granted
<b>King Mongkut's</b>		
<b>University of Technology</b>		
<b>Thonburi (KMUTT)</b>		
School of Information Technology	<ul style="list-style-type: none"> <li>• Computer Science</li> </ul>	B.Sc.
Faculty of Engineering	<ul style="list-style-type: none"> <li>• Civil Engineering</li> <li>• Computer Engineering</li> </ul>	B.Eng. B.Eng.
School of Architecture and Design	<ul style="list-style-type: none"> <li>• Architecture</li> <li>• Communication Design</li> <li>• Industrial Design</li> <li>• Interior Architecture</li> </ul>	B.Arch. B.F.A. B.Arch. B.Arch.
<b>Mae Fah Luang</b>		
<b>University</b>		
School of Liberal Arts	<ul style="list-style-type: none"> <li>• English</li> <li>• Business Chinese</li> </ul>	B.A. B.A.
School of Information Technology	<ul style="list-style-type: none"> <li>• Information Technology</li> <li>• Computer Sciences</li> <li>• Computer Engineering</li> <li>• Information and Communication Technology</li> </ul>	B.S. B.S. B.Eng. B.Eng.

University/Faculty	Disciplines	Degree granted
School of Management	• Accounting	B.Acc.
	• Economics	B.Econ
	• Business Administration	B.B.A.
	• Tourism Management	B.B.A.
School of Agro-Industry	• Food Techonology	B.S.
	• Postharvest Technology and Package	B.Sc.
School of Sciences	• Biotechnology	B.S.
School of Laws	• Laws	LL.B.
<b>Mahidol University</b>		
Mahidol University	• Applied Mathematics	B.Sc.
International College	• Chemistry	B.Sc.
	• Physics	B.Sc.
	• Environment	B.Sc.
	• Food Science and Technology	B.Sc.
	• Biological Science	B.Sc.
	• Computer Science	B.Sc.
	• Finance	B.B.A.
	• Management	B.B.A.
	• Marketing	B.B.A.
	• International Business	B.B.A.

University/Faculty	Disciplines	Degree granted
Faculty of Science	• Information Systems	B.B.A.
	• Social Science	B.A.
	• Travel Industry Management	B.A.
	• Nursing Science	B.N.S.
	• Information and Communication Technology	B.Sc.
<b>Naresuan University</b>		
Faculty of Humanities and Social Sciences	• Laws	LLB.
	• Tourism Management	B.B.A.
<b>Prince of Songkla University</b>		
Faculty of Service Industries	• Hotel Management	B.B.A.
	• International Business	B.A.
Faculty of Management Sciences	• Management	B.B.A.
<b>Rajabhat Institute</b>		
<b>Phranakhon Si Ayuthaya</b>	• English	B.A.
	• Tourism Industry	B.A.
	• Business Administration	B.B.A.
	• Business English	B.A.

University/Faculty	Disciplines	Degree granted
<b>Rajabhat Institute Suan</b>		
<b>Sunandha</b>		
Faculty of Humanities and Social Sciences	<ul style="list-style-type: none"> <li>• Hospitality and Tourism</li> <li>• Business English</li> </ul>	B.A. (Bachelor of Arts)
Faculty of Management Science	<ul style="list-style-type: none"> <li>• International Business</li> </ul>	B.B.A. (Bachelor of Business Administration)
<b>Rajamangala Institute of Technology</b>		
	<ul style="list-style-type: none"> <li>• International Business Management</li> </ul>	B.B.A.
	<ul style="list-style-type: none"> <li>• Accounting</li> </ul>	B.B.A.
	<ul style="list-style-type: none"> <li>• Information Systems</li> </ul>	B.B.A.
	<ul style="list-style-type: none"> <li>• Marketing</li> </ul>	B.B.A.
<b>Ramkhamhaeng University</b>		
The Institute of International Studies	<ul style="list-style-type: none"> <li>• General Management</li> <li>• Finance and Banking</li> <li>• Marketing</li> <li>• International Business Mgt.</li> <li>• Mass Communication Technology</li> </ul>	B.B.A. B.B.A. B.B.A. B.B.A. B.A. (Mass Communication Technology)

University/Faculty	Disciplines	Degree granted
Silpakorn University International College	• Printing Technology and Print Media	B.A. (Printing Technology and Print Media)
	• Radio and Television	B.A. (Radio and Television)
	• Cinema	B.A. (Cinema)
	• Speech and Performance Studies	B.A. (Speech and Performance Studies)
	• English	B.A. (English)
	• Hospitality Management	B.B.A.
	• Multimedia Design	B.F.A.
	• Painting Conservation	B.F.A.
Srinakharinwirot University		
Faculty of Humanities	• Intensive Thai	Cert.
	• Medicine	B.Sc.
	• Pharmacy	B.Sc.
Institute of Ecotourism	• Ecotourism and Hospitality Management	C.B.



University/Faculty	Disciplines	Degree granted
<b>Thammasat University</b>		
Faculty of Commerce and Accountancy	<ul style="list-style-type: none"> <li>Accounting</li> <li>Finance and Banking</li> <li>Marketing</li> </ul>	B.Sc. B.B.A. B.B.A.
Faculty of Economics	<ul style="list-style-type: none"> <li>Economics</li> </ul>	B.Econ.
Faculty of Liberal Arts	<ul style="list-style-type: none"> <li>British-American Studies</li> </ul>	B.A.
Faculty of Engineering	<ul style="list-style-type: none"> <li>Mechanical Engineering</li> <li>Chemical Engineering</li> <li>Civil Engineering</li> <li>Electrical Engineering</li> <li>Industrial Engineering</li> <li>Mechanical Engineering</li> <li>Chemical Engineering</li> <li>Civil Engineering</li> <li>Electrical Engineering</li> <li>Industrial Engineering</li> </ul>	B.Eng. B.Eng. B.Eng. B.Eng. B.Eng. B.Eng. B.Eng. B.Eng. B.Eng. B.Eng.
Sirindhorn International Institute of Technology	<ul style="list-style-type: none"> <li>Civil Engineering</li> <li>Mechanical Engineering</li> <li>Industrial Engineering</li> </ul>	B.Eng. B.Eng. B.Eng.

University/Faculty	Disciplines	Degree granted
Office of International Affairs	• Electrical Power Engineering	B.Eng.
	• Building Facilities Engineering	B.Eng.
	• Communications	B.Eng.
	• Information Technology	B.Sc.
	• Environmental Technology	B.Sc.
	• Energy Technology	B.Sc.
	• Management Technology	B.Sc.
	• Instrumentation and Control Systems	B.Sc.
	• Mechatronics	Cert.
	• Thai Study	Cert.
	• Special Study about Buddhism and Thai Society	

## Undergraduate Programs

### Private Higher Education Institutions

University/Faculty	Disciplines	Degree granted
<b>Assumption University</b>		
Faculty of Architecture	• Architecture	B.Arch.
	• Interior Architecture	B.Arch.
Faculty of Arts	• Business English	B.A.
	• Business French	B.A.
	• Business Chinese	B.A.
	• Business Japanese	B.A.
	• Music Business	B.A.
Faculty of Biotechnology	• Food Technology	B.S.
	• Agro-Industry	B.S.
	• Marketing	B.B.A.
Faculty of Business Administration	• General Management	B.B.A.
	• Finance and Banking	B.B.A.
	• Accounting	B.B.A.
	• Business Information Systems	B.B.A.
	• Advertising Management	B.B.A.
	• Hotel Management	B.B.A.
	• International Business Mgt.	B.B.A.
	• Property Valuation	B.B.A.

Faculty of Communication	• Advertising	B.A.
	• Visual Communication Arts	B.A.
Arts	• Public Relations	B.A.
	• Performance Communication	B.A.
	• Broadcast and New Media	B.A.
	• Electrical Engineering	B.S.
Faculty of Engineering	• Electronics Engineering	B.S.
	• Computer Engineering	B.S.
	• Telecommunication Engineering	B.S.
	• Business Law	L.L.B.
Faculty of Law	• Nursing Science	B.N.S.
Faculty of Nursing Science	• General Lines Insurance	B.B.A.
Faculty of Risk Mgt. and	• Life Assurance	B.B.A.
Industrial Services	• Property and Casualty Insurance	B.B.A.
	• Marine and Aviation Insurance	B.B.A.
	• Industrial Management	B.B.A.
	• Real Estate	B.B.A.
	• Actuarial Science	B.B.A.

<b>Bangkok University</b>	• Business English	B.A.
Bangkok University	• Communication Arts	B.A.
International College	• Hotel and Tourism Mgt.	B.A.
	• Marketing	B.B.A.
<b>Dhurakijpundit University</b>	• Information Techonology	B.S.

### **Dusit Thani College**

Faculty of Hospitality	• Hotel Management	B.B.A.
Industry	• Kitchen & Restaurant Mgt.	B.B.A.

### **International Buddhist**

#### **College**

Faculty of Liberal Arts	• Scriptural Language and Literature	B.A.
Faculty of Religious Studies	• Buddhist Thought	B.A.
	• Buddhist Historical and Cultural Studies	B.A.

### **Mission College**

Faculty of Arts and Humanities	• English Language	B.A.
	• Psychology and Education	B.A.
Faculty of Business Administration	• Accounting	B.B.A.
	• Computer Information Systems	B.B.A.
	• Entrepreneurship	B.B.A.
	• Christian Studies (Applied	

Faculty of Religious Studies                      Theology)                      B.A.

- Christian Studies (Religion Education)                      B.A.

- Biology

Faculty of Science                      • Mathematics                      B.Sc.

B.Sc.

### **Payap University**

International Programs                      • Thai and Southeast Asian Cert.  
Studies

International College                      • English Communication                      B.A.

- Computer Information Systems                      B.Sc.

- International Business Mgt.                      B.B.A.

- International Hospitality Mgt.                      B.B.A.

### **Saint John's University**

Faculty of Business                      • Computer Information Mgt.                      B.B.A.

Administration                      • Marketing                      B.B.A.

Schiller Stamford                      B.B.A.

### **International University**

Faculty of Business                      • Accounting                      B.B.A.

Administration                      • Finance                      B.B.A.

- Management                      B.B.A.

- Marketing                      B.B.A.

- Information Systems Mgt                      B.B.A.



Faculty of Liberal Arts	• Business English	B.A.
	• Communication Arts	B.A.
	• Tourism and Hotel	B.A.
	Administration	

Faculty of Science and Technology	• Computer Science	B.Sc.
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### **Shinawatra University**

School of Information and Communication Technology (ICT)	• Computer Science	B.Sc in Computer Science
	• Telecommunication Engineering	B.Eng. in Telecommunicati ons Engineering
School of Built Environment and Technology (BET)	• Built Environment	B.Sc. in Built Environment
School of Management (MGT)	• Managment	B.B.A. in Mgt.

<b>Siam University</b>	• International Business	B.B.A.
	• Hotel and Tourism Mgt.	B.B.A.

### **Sripatum University**

International College	• International Business	B.A. International
	Communication	Business
		Communication

- Business Administration B.B.A.
  - Marketing
  - General Management

## Webster University

### (Thailand)

- |                            |                                 |        |
|----------------------------|---------------------------------|--------|
| College of Art and Science | • Behavioral and Social Science | B.A.   |
|                            | (Psychology)                    |        |
|                            | • International Relations       | B.A.   |
| School of Business and     | • Business Administration       | B.B.A. |
| Technology                 | • Information Technology        | B.S.   |
|                            | • International Business        | B.A.   |
|                            | • Management                    | B.A.   |
| School of Communication    | • Advertising & Marketing       | B.A.   |
|                            | Communications                  |        |
|                            | • Media Communications          | B.A.   |
|                            | • Public Relations              | B.A.   |

## APPENDIX C

### RELIABILITY TEST



## The Pretest Data

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.853	.861	5

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
e8	16.25	9.032	.557	.494	.855
e14	15.63	9.532	.673	.671	.823
e16	16.16	8.136	.760	.705	.796
e17	16.16	8.007	.754	.696	.798
e19	15.44	10.319	.650	.590	.834

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.798	.805	5

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
e2	15.50	12.194	.586	.528	.758
e4	15.38	11.016	.742	.649	.702
e22	15.22	14.112	.607	.419	.760
e23	15.00	13.032	.606	.512	.752
e24	15.03	13.515	.415	.199	.814

### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.885	.888	6

### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
e1	17.38	29.145	.555	.667	.888
e7	17.81	26.415	.772	.786	.853
e10	17.56	27.931	.690	.587	.867
e15	17.38	29.726	.708	.681	.868
e25	17.94	25.351	.740	.866	.859
e26	17.72	25.628	.762	.867	.855



**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.754	.763	4

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
e3	11.28	6.660	.674	.469	.622
e6	11.31	8.028	.411	.255	.773
e13	11.50	6.194	.647	.563	.639
e20	10.72	9.112	.539	.444	.722

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.870	.871	6

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
e5	18.00	24.194	.592	.596	.862
e9	18.47	21.483	.783	.755	.827
e11	18.09	23.572	.620	.543	.858
e12	18.69	21.899	.744	.738	.835
e18	18.09	23.894	.730	.623	.839
e21	17.56	26.641	.578	.486	.864

**Scale Statistics**

Mean	Variance	Std. Deviation	N of Items
21.78	33.144	5.757	6



**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.847	.848	5

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
p8	15.03	11.451	.495	.305	.856
p14	14.47	9.225	.759	.723	.786
p16	14.94	10.770	.708	.576	.806
p17	14.66	9.652	.694	.506	.806
p19	14.16	10.652	.645	.636	.819

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.764	.768	5

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
p2	13.69	15.835	.370	.244	.771
p4	13.53	13.354	.656	.438	.680
p22	13.03	13.515	.669	.465	.678
p23	12.75	11.806	.583	.406	.707
p24	13.00	14.581	.432	.241	.756

### Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.846	.848	6

### Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
p1	13.81	15.641	.567	.378	.833
p7	14.22	15.531	.557	.347	.835
p10	14.03	15.580	.568	.403	.833
p15	13.53	15.354	.669	.529	.813
p25	14.13	15.339	.641	.578	.818
p26	14.03	14.547	.779	.724	.792



**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.719	.723	4

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
p3	9.72	5.434	.543	.325	.636
p6	9.78	5.660	.460	.226	.690
p13	10.19	6.093	.499	.265	.663
p20	8.84	6.007	.540	.302	.641

**Reliability Statistics**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.726	.733	6

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
p5	15.06	15.996	.431	.367	.698
p9	15.72	16.725	.523	.473	.673
p11	15.41	15.475	.469	.484	.686
p12	15.66	15.072	.477	.406	.684
p18	14.84	17.491	.410	.414	.702
p21	14.41	17.281	.485	.387	.684

## APPENDIX D

### STATISTIC TEST



	1	2	3	4	5
Admission requirements are clearly stated and well documented in the undergraduate catalog	15 4.2%	26 7.2%	125 34.7%	140 38.9%	54 15.0%
University possesses modern facilities and equipment (buildings, classrooms)	13 3.6%	27 7.5%	86 23.9%	159 44.2%	75 20.8%
Materials associated with the university (catalogs, brochures, etc.) are usually appealing	8 2.2%	42 11.7%	109 30.3%	160 44.4%	41 11.4%
University possesses up-to-date technology (computer hardware and software)	15 4.2%	40 11.1%	102 28.3%	145 40.3%	58 16.1%
University campus is clean and visually appealing	12 3.3%	21 5.8%	76 21.1%	153 42.5%	98 27.2%

	1	2	3	4	5
Business and support staffs resolve students problems in an equitable manner	36 10.0%	60 16.7%	113 31.4%	106 29.4%	45 12.5%
University personnel are believable, trustworthy, and honest	18 5.0%	45 12.5%	128 35.6%	116 32.2%	53 14.7%
Business and support facilities provide services as promised	11 3.1%	48 13.3%	132 36.7%	129 35.8%	40 11.1%
Services are provided as promised by a Financial Aid Office	12 3.3%	42 11.7%	136 37.8%	134 37.2%	36 10.0%
University records are maintained error-free	25 6.9%	60 16.7%	122 33.9%	115 31.9%	38 10.6%

	1	2	3	4	5
Department faculty and staff a willingness to have students	14 3.9%	49 13.6%	127 35.3%	123 34.2%	47 13.1%
Department faculty and staff respond in a timely manner to questions and requests	15 4.2%	47 13.1%	127 35.3%	125 34.7%	46 12.8%
Department course scheduling reflects the needs of students	10 2.8%	54 15.0%	133 36.9%	117 32.5%	46 12.8%
Required paper work that flows to department/ undergraduate school/undergraduate office is handled efficiently and in a timely manner	13 3.6%	50 13.9%	118 32.8%	131 36.4%	48 13.3%
Services associated with the registration process are handled in an efficient and effective manner	41 11.4%	56 15.6%	107 29.7%	107 29.7%	49 13.6%
Services associated with the admission process are handled in an efficient and effective manner	23 6.4%	47 13.1%	119 33.1%	119 33.1%	52 14.4%

	1	2	3	4	5
Advisor and/or chair of committee provides adequate guidance to ensure meeting program requirements	15 4.2%	49 13.6%	111 30.8%	139 38.6%	46 12.8%
University personnel are consistently courteous (polite)	22 6.1%	42 11.7%	104 28.9%	132 36.7%	60 16.7%
Department faculty and staff are knowledgeable when asked questions about program requirements by students	24 6.7%	50 13.9%	115 31.9%	123 34.2%	48 13.3%
University campus is safe and secured	12 3.3%	27 7.5%	73 20.3%	149 41.4%	99 27.5%

	1	2	3	4	5
Faculty gives individual attention to students when necessary	15 4.2%	49 13.6%	107 29.7%	137 38.1%	52 14.4%
Department staff show a sincere interest in students	19 5.3%	60 16.7%	127 35.3%	106 29.4%	48 13.3%
University personnel deal with students in a caring fashion	30 8.3%	49 13.6%	126 35.0%	111 30.8%	44 12.2%
Department faculty and staff have the best interest of students at heart	36 10.0%	61 16.9%	111 30.8%	104 28.9%	48 13.3%
University computers are assessable and available for students use at convenient hours	25 6.9%	48 13.3%	111 30.8%	114 31.7%	62 17.2%
University libraries have convenient hours	14 3.9%	32 8.9%	72 20.0%	148 41.1%	94 26.1%



	1	2	3	4	5
Admission requirements are clearly stated and well documented in the undergraduate catalog	13 3.6%	40 11.1%	149 41.4%	127 35.3%	31 8.6%
University possesses modern facilities and equipment (buildings, classrooms)	9 2.5%	38 10.6%	101 28.1%	167 46.4%	45 12.5%
Materials associated with the university (catalogs, brochures, etc.) are usually appealing	7 1.9%	49 13.6%	127 35.3%	149 41.4%	28 7.8%
University possesses up-to-date technology (computer hardware and software)	14 3.9%	50 13.9%	119 33.1%	138 38.3%	39 10.8%
University campus is clean and visually appealing	9 2.5%	31 8.6%	95 26.4%	151 41.9%	74 20.6%

	1	2	3	4	5
Business and support staffs resolve students problems in an equitable manner	34 9.4%	71 19.7%	138 38.3%	93 25.8%	24 6.7%
University personnel are believable, trustworthy, and honest	20 5.6%	61 16.9%	131 36.4%	121 33.6%	27 7.5%
Business and support facilities provide services as promised	20 5.6%	51 14.2%	156 43.3%	105 29.2%	28 7.8%
Services are provided as promised by a Financial aid Office	13 3.6%	52 14.4%	167 46.4%	117 32.5%	11 3.1%
University records are maintained error-free	26 7.2%	67 18.6%	150 41.7%	100 27.8%	17 4.7%

	1	2	3	4	5
Department faculty and staff a willingness to have students	17 4.7%	54 15.0%	136 37.8%	130 36.1%	23 6.4%
Department faculty and staff respond in a timely manner to questions and requests	23 6.4%	68 18.9%	132 36.7%	109 30.3%	28 7.8%
Department course scheduling reflects the needs of students	21 5.8%	64 17.8%	129 35.8%	114 31.7%	32 8.9%
Required paper work that flows to department/ undergraduate school/undergraduate office is handled efficiently and in a timely manner	18 5.0%	73 20.3%	131 36.4%	120 33.3%	18 5.0%
Services associated with the registration process are handled in an efficient and effective manner	39 10.8%	65 18.1%	137 38.1%	90 25.0%	29 8.1%
Services associated with the admission process are handled in an efficient and effective manner	29 8.1%	63 17.5%	129 35.8%	106 29.4%	33 9.2%

	1	2	3	4	5
Advisor and/or chair of committee provides adequate guidance to ensure meeting program requirements	16 4.4%	57 15.8%	141 39.2%	126 35.0%	20 5.6%
University personnel are consistently courteous (polite)	27 7.5%	58 16.1%	120 33.3%	125 34.7%	30 8.3%
Department faculty and staff are knowledgeable when asked questions about program requirements by students	24 6.7%	70 19.4%	112 31.1%	130 36.1%	24 6.7%
University campus is safe and secured	10 2.8%	33 9.2%	92 25.6%	159 44.2%	66 18.3%

	1	2	3	4	5
Faculty gives individual attention to students when necessary	20 5.6%	50 13.9%	134 37.2%	128 35.6%	28 7.8%
Department staff show a sincere interest in students	33 9.2%	63 17.5%	146 40.6%	101 28.1%	17 4.7%
University personnel deal with students in a caring fashion	30 8.3%	54 15.0%	146 40.6%	101 28.1%	29 8.1%
Department faculty and staff have the best interest of students at heart	35 9.7%	75 20.8%	130 36.1%	97 26.9%	23 6.4%
University computers are assessable and available for students use at convenient hours	24 6.7%	62 17.2%	116 32.2%	132 36.7%	26 7.2%
University libraries have convenient hours	17 4.7%	46 12.8%	104 28.9%	133 36.9%	60 16.7%

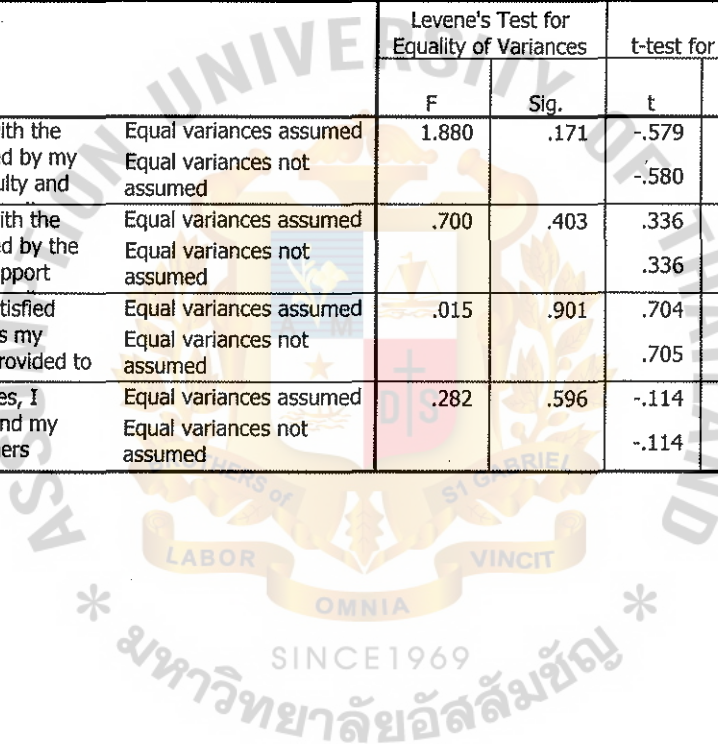
	1	2	3	4	5
I am satisfied with the services provided by my department faculty and staff at my university	33 9.2%	61 16.9%	137 38.1%	111 30.8%	18 5.0%
I am satisfied with the services provided by the business and support staff at my university	26 7.2%	80 22.2%	129 35.8%	108 30.0%	17 4.7%
Overall, I am satisfied with the services my university has provided to me	26 7.2%	64 17.8%	141 39.2%	108 30.0%	21 5.8%
Based on services, I would recommend my university to others	27 7.5%	50 13.9%	139 38.6%	113 31.4%	31 8.6%

### Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
I am satisfied with the services provided by my department faculty and staff at my university	Male	173	3.0231	.99390	.07556
	Female	187	3.0856	1.04889	.07670
I am satisfied with the services provided by the business and support staff at my university	Male	173	3.0462	1.00473	.07639
	Female	187	3.0107	.99994	.07312
Overall, I am satisfied with the services my university has provided to me	Male	173	3.1329	.99400	.07557
	Female	187	3.0588	1.00095	.07320
Based on services, I would recommend my university to others	Male	173	3.1908	1.05297	.08006
	Female	187	3.2032	1.01143	.07396

### Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
I am satisfied with the services provided by my department faculty and	Equal variances assumed	1.880	.171	-.579	358	.563
	Equal variances not assumed			-.580	357.8	.562
I am satisfied with the services provided by the business and support	Equal variances assumed	.700	.403	.336	358	.737
	Equal variances not assumed			.336	355.6	.737
Overall, I am satisfied with the services my university has provided to	Equal variances assumed	.015	.901	.704	358	.482
	Equal variances not assumed			.705	356.2	.482
Based on services, I would recommend my university to others	Equal variances assumed	.282	.596	-.114	358	.909
	Equal variances not assumed			-.114	353.1	.909



# ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Expected Tangible	Between Groups	.369	2	.185	.302	.739
	Within Groups	218.305	357	.611		
	Total	218.675	359			
Expected Reliability	Between Groups	3.950	2	1.975	2.655	.072
	Within Groups	265.581	357	.744		
	Total	269.531	359			
Expected Responsiveness	Between Groups	2.433	2	1.216	1.727	.179
	Within Groups	251.452	357	.704		
	Total	253.885	359			
Expected Assurance	Between Groups	2.780	2	1.390	2.027	.133
	Within Groups	244.744	357	.686		
	Total	247.523	359			
Expected Empathy	Between Groups	4.344	2	2.172	3.033	.049
	Within Groups	255.702	357	.716		
	Total	260.046	359			
Perceived Tangible	Between Groups	4.450	2	2.225	4.324	.014
	Within Groups	183.715	357	.515		
	Total	188.165	359			
Perceived Reliability	Between Groups	5.052	2	2.526	4.144	.017
	Within Groups	217.632	357	.610		
	Total	222.684	359			
Perceived Responsiveness	Between Groups	2.941	2	1.470	2.149	.118
	Within Groups	244.229	357	.684		
	Total	247.170	359			
Perceived Assurance	Between Groups	2.746	2	1.373	2.342	.098
	Within Groups	209.285	357	.586		
	Total	212.031	359			
Perceived Empathy	Between Groups	4.452	2	2.226	3.798	.023
	Within Groups	209.201	357	.586		
	Total	213.653	359			
I am satisfied with the services provided by my department faculty and staff at my university	Between Groups	1.490	2	.745	.712	.491
	Within Groups	373.399	357	1.046		
	Total	374.889	359			
I am satisfied with the services provided by the business and support staff at my university	Between Groups	4.359	2	2.179	2.190	.113
	Within Groups	355.363	357	.995		
	Total	359.722	359			
Overall, I am satisfied with the services my university has provided to me	Between Groups	4.707	2	2.354	2.387	.093
	Within Groups	352.081	357	.986		
	Total	356.789	359			
Based on services, I would recommend my university to others	Between Groups	5.407	2	2.703	2.570	.078
	Within Groups	375.590	357	1.052		
	Total	380.997	359			

# ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Expected Tangible	Between Groups	.971	3	.324	.529	.662
	Within Groups	217.704	356	.612		
	Total	218.675	359			
Expected Reliability	Between Groups	1.084	3	.361	.479	.697
	Within Groups	268.446	356	.754		
	Total	269.531	359			
Expected Responsiveness	Between Groups	.700	3	.233	.328	.805
	Within Groups	253.185	356	.711		
	Total	253.885	359			
Expected Assurance	Between Groups	2.285	3	.762	1.106	.347
	Within Groups	245.238	356	.689		
	Total	247.523	359			
Expected Empathy	Between Groups	.947	3	.316	.434	.729
	Within Groups	259.099	356	.728		
	Total	260.046	359			
Perceived Tangible	Between Groups	6.253	3	2.084	4.079	.007
	Within Groups	181.912	356	.511		
	Total	188.165	359			
Perceived Reliability	Between Groups	1.708	3	.569	.917	.433
	Within Groups	220.976	356	.621		
	Total	222.684	359			
Perceived Responsiveness	Between Groups	3.234	3	1.078	1.573	.196
	Within Groups	243.936	356	.685		
	Total	247.170	359			
Perceived Assurance	Between Groups	1.927	3	.642	1.088	.354
	Within Groups	210.104	356	.590		
	Total	212.031	359			
Perceived Empathy	Between Groups	1.333	3	.444	.745	.526
	Within Groups	212.320	356	.596		
	Total	213.653	359			
I am satisfied with the services provided by my department faculty and staff at my university	Between Groups	3.871	3	1.290	1.238	.296
	Within Groups	371.018	356	1.042		
	Total	374.889	359			
I am satisfied with the services provided by the business and support staff at my university	Between Groups	.968	3	.323	.320	.811
	Within Groups	358.755	356	1.008		
	Total	359.722	359			
Overall, I am satisfied with the services my university has provided to me	Between Groups	2.076	3	.692	.694	.556
	Within Groups	354.713	356	.996		
	Total	356.789	359			
Based on services, I would recommend my university to others	Between Groups	7.847	3	2.616	2.495	.060
	Within Groups	373.150	356	1.048		
	Total	380.997	359			



# Correlations

		Expected Tangible	Expected Reliability	Expected Responsiveness	Expected Assurance	Expected Empathy	Perceived Tangible	Perceived Reliability	Perceived Responsiveness	Perceived Assurance	Perceived Empathy
Expected Tangible	Pearson	1	.660*	.629*	.674*	.583*	.547*	.320*	.365*	.368*	.351*
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	360	360	360	360	360	360	360	360	360	360
Expected Reliability	Pearson	.660*	1	.827*	.816*	.783*	.390*	.493*	.438*	.419*	.429*
	Sig. (2-tailed)	.000		.000	.000	.000	.000	.000	.000	.000	.000
	N	360	360	360	360	360	360	360	360	360	360
Expected Responsiveness	Pearson	.629*	.827*	1	.814*	.808*	.413*	.474*	.481*	.432*	.464*
	Sig. (2-tailed)	.000	.000		.000	.000	.000	.000	.000	.000	.000
	N	360	360	360	360	360	360	360	360	360	360
Expected Assurance	Pearson	.674*	.816*	.814*	1	.822*	.457*	.467*	.472*	.544*	.490*
	Sig. (2-tailed)	.000	.000	.000		.000	.000	.000	.000	.000	.000
	N	360	360	360	360	360	360	360	360	360	360
Expected Empathy	Pearson	.583*	.783*	.808*	.822*	1	.437*	.470*	.430*	.484*	.553*
	Sig. (2-tailed)	.000	.000	.000	.000		.000	.000	.000	.000	.000
	N	360	360	360	360	360	360	360	360	360	360
Perceived Tangible	Pearson	.547*	.390*	.413*	.457*	.437*	1	.600*	.629*	.645*	.604*
	Sig. (2-tailed)	.000	.000	.000	.000	.000		.000	.000	.000	.000
	N	360	360	360	360	360	360	360	360	360	360
Perceived Reliability	Pearson	.320*	.493*	.474*	.467*	.470*	.600*	1	.829*	.727*	.754*
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	360	360	360	360	360	360	360	360	360	360
Perceived Responsiveness	Pearson	.365*	.438*	.481*	.472*	.430*	.629*	.829*	1	.769*	.779*
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	360	360	360	360	360	360	360	360	360	360
Perceived Assurance	Pearson	.368*	.419*	.432*	.544*	.484*	.645*	.727*	.769*	1	.829*
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	360	360	360	360	360	360	360	360	360	360
Perceived Empathy	Pearson	.351*	.429*	.464*	.490*	.553*	.604*	.754*	.779*	.829*	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
	N	360	360	360	360	360	360	360	360	360	360

\*\*. Correlation is significant at the 0.01 level (2-tailed).

# Correlations

		I am satisfied with the services provided by my department faculty and staff at my university	I am satisfied with the services provided by the business and support staff at my university	Overall, I am satisfied with the services my university has provided to me	Based on services, I would recommend my university to others
I am satisfied with the services provided by my department faculty and staff at my university	Pearson	1	.785*	.722*	.667*
	Sig. (2-tailed)		.000	.000	.000
	N	360	360	360	360
I am satisfied with the services provided by the business and support staff at my university	Pearson	.785*	1	.690*	.670*
	Sig. (2-tailed)	.000		.000	.000
	N	360	360	360	360
Overall, I am satisfied with the services my university has provided to me	Pearson	.722*	.690*	1	.692*
	Sig. (2-tailed)	.000	.000		.000
	N	360	360	360	360
Based on services, I would recommend my university to others	Pearson	.667*	.670*	.692*	1
	Sig. (2-tailed)	.000	.000	.000	
	N	360	360	360	360

\*\*. Correlation is significant at the 0.01 level (2-tailed).



### Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Expected Tangible	3.6261	360	.78046	.04113
	Perceived Tangible	3.4744	360	.72397	.03816
Pair 2	Expected Reliability	3.3139	360	.86648	.04567
	Perceived Reliability	3.1233	360	.78758	.04151
Pair 3	Expected Responsiveness	3.3532	360	.84095	.04432
	Perceived Responsiveness	3.1454	360	.82976	.04373
Pair 4	Expected Assurance	3.5104	360	.83035	.04376
	Perceived Assurance	3.3111	360	.76851	.04050
Pair 5	Expected Empathy	3.3884	360	.85110	.04486
	Perceived Empathy	3.1806	360	.77145	.04066

### Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	Expected Tangible & Perceived Tangible	360	.547	.000
Pair 2	Expected Reliability & Perceived Reliability	360	.493	.000
Pair 3	Expected Responsiveness & Perceived Responsiveness	360	.481	.000
Pair 4	Expected Assurance & Perceived Assurance	360	.544	.000
Pair 5	Expected Empathy & Perceived Empathy	360	.553	.000

### Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Expected Tangible - Perceived Tangible	.1517	.71809	.03785	.0772	.2261	4.007	359	.000
Pair 2	Expected Reliability - Perceived Reliability	.1906	.83584	.04405	.1039	.2772	4.326	359	.000
Pair 3	Expected Responsiveness - Perceived Responsiveness	.2079	.85097	.04485	.1197	.2961	4.635	359	.000
Pair 4	Expected Assurance - Perceived Assurance	.1993	.76576	.04036	.1199	.2787	4.938	359	.000
Pair 5	Expected Empathy - Perceived Empathy	.2079	.76992	.04058	.1281	.2877	5.123	359	.000

### Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
Expected Tangible	Male	173	3.5410	.77968	.05928
	Female	187	3.7048	.77496	.05667
Expected Reliability	Male	173	3.2451	.81301	.06181
	Female	187	3.3775	.91071	.06660
Expected Responsiveness	Male	173	3.3208	.75011	.05703
	Female	187	3.3832	.91803	.06713
Expected Assurance	Male	173	3.4913	.80057	.06087
	Female	187	3.5281	.85875	.06280
Expected Empathy	Male	173	3.3690	.79211	.06022
	Female	187	3.4064	.90400	.06611
Perceived Tangible	Male	173	3.4231	.71099	.05406
	Female	187	3.5219	.73448	.05371
Perceived Reliability	Male	173	3.1723	.76594	.05823
	Female	187	3.0781	.80649	.05898
Perceived Responsiveness	Male	173	3.1696	.80283	.06104
	Female	187	3.1230	.85546	.06256
Perceived Assurance	Male	173	3.3526	.79283	.06028
	Female	187	3.2727	.74538	.05451
Perceived Empathy	Male	173	3.2312	.78863	.05996
	Female	187	3.1337	.75429	.05516

### Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Expected Tangible	Equal variances assumed	.244	.622	-1.997	358	.047
	Equal variances not assumed			-1.997	355.5	.047
Expected Reliability	Equal variances assumed	2.026	.155	-1.451	358	.148
	Equal variances not assumed			-1.458	357.6	.146
Expected Responsiveness	Equal variances assumed	6.431	.012	-.703	358	.482
	Equal variances not assumed			-.709	352.7	.479
Expected Assurance	Equal variances assumed	.086	.770	-.419	358	.675
	Equal variances not assumed			-.420	358.0	.675
Expected Empathy	Equal variances assumed	1.751	.187	-.417	358	.677
	Equal variances not assumed			-.419	357.0	.676
Perceived Tangible	Equal variances assumed	.247	.620	-1.295	358	.196
	Equal variances not assumed			-1.297	357.3	.196
Perceived Reliability	Equal variances assumed	.070	.791	1.134	358	.258
	Equal variances not assumed			1.136	357.7	.257
Perceived Responsiveness	Equal variances assumed	.531	.467	.531	358	.595
	Equal variances not assumed			.533	357.9	.595
Perceived Assurance	Equal variances assumed	.825	.364	.985	358	.325
	Equal variances not assumed			.983	351.2	.326
Perceived Empathy	Equal variances assumed	1.095	.296	1.199	358	.231
	Equal variances not assumed			1.197	352.7	.232



