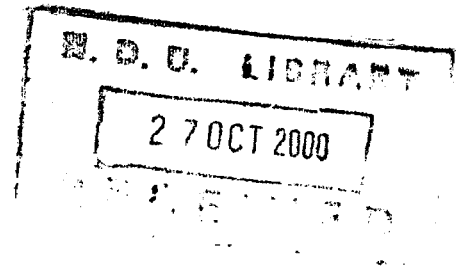NOTRE DAME UNIVERSITY

TOTAL QUALITY MANAGEMENT IN HIGHER EDUCATION: CASE OF NOTRE DAME UNIVERSITY

BY
CARLA F. IBRAHIM

A Research Project
Submitted in partial fulfillment of the requirements
For the degree of Master in Business Administration
Of the Faculty of Business Administration and Economics
At Notre Dame University

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TOTAL QUALITY MANAGEMENT IN HIGHER EDUCATION:
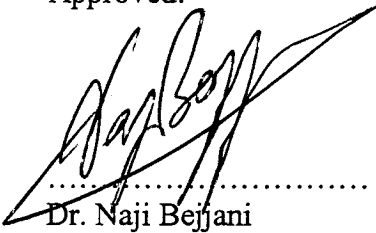CASE OF NOTRE DAME UNIVERSITY

By
Carla Ibrahim

A research project submitted in partial fulfillment of the requirements for the degree
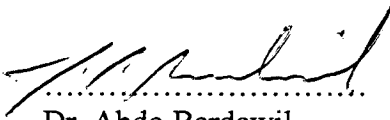
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AN ABSTRACT OF THE RESEARCH PROJECT OF

Carla Ibrahim for Master of Business Administration

Title: Total Quality Management in Higher Education: Case of Notre Dame
University

The research is a study on Total Quality Management in higher education.
More specifically, the ways of improvement at NDU will be discussed.

Total Quality Management has given very good results in industry and
businesses as a whole. The issue has started gaining in importance in the educational
field. In Lebanon, the quality improvement efforts are still very shy.

After a review of the various functions of NDU, a series of interviews were
conducted with Human Resources executives in various business enterprises.
Moreover, a survey was conducted with the students at NDU. On the other hand,
another survey was conducted with the faculty and administrative staff of the
university.

The survey results uncovered different areas where improvements can be
made. Support services like the library and the computer center need some major
improvements in terms of accessibility and availability of resources. On the
administrative level, the registration process is a major source of dissatisfaction. On
the other hand, outside sources were concerned with the programs offered at the
university. They stressed on the need for more internship hours as requirements in the
programs. Moreover, more professionals should be members of the teaching body in
order to introduce practical examples as complements to the theoretical aspect of the
courses.

The solutions to be introduced on the administrative as well as on the
academic level will have to take the human factor into consideration. As much as the
cultural influence can have positive impacts, it can also become a major obstacle if
not properly accounted for.

INTRODUCTION

THE TOPIC

At the dawn of the new millennium, we cannot but think about the great opportunities lying ahead and the challenges we have to meet in order to insure success on all fronts.

Companies are changing their ways of doing business in order to keep on running well and take advantage of all possible opportunities. The trend is towards a new culture; a culture where quality and continuous improvement are predominant, and where people have to be quicker, smarter and bolder, all in an open communication environment.

This whole new shift is affecting organizations of all kinds, including non-profit oriented ones. Specifically, universities are becoming more concerned with quality concepts and culture.

And as NDU is going to challenge already pre-established other universities, it has to offer something different and unique that will be its competitive edge over the other institutions.

This research will analyze the current situation at NDU from different points of views: The administration, the teaching body, the students and their relationship with the university and top management, in our case the Mariamite religious order.

Suggestions will be made on what needs to be done, and what changes need to be brought at the university for quality to be inherently present. Moreover, it is important to determine how much the human resources at NDU are willing to change and commit to the new culture. Without the commitment of all parties concerned, there cannot be a successful application of the quality improvement concepts and principles.

WHY IS IT IMPORTANT?

This issue is becoming increasingly important. The "customers" i.e. the students, university employees, parents, potential employers and Society at large are becoming more concerned about getting quality services.

Students want to get value learning for the time they spend at the university; parents want to get value for the money they invested on their children's education (education does not come cheap). The university employees would be more productive and keen on doing their jobs well, if they had a comfortable and pleasant working environment. Improvements on all levels of the administrative body would reflect positively in the performance of the employees, which will in turn reflect well on the students when dealing with the administration.

Potential employers also require personnel aware of the quality concepts and culture. Long before universities, companies started applying Total Quality Management concepts aiming to improve their products and work atmosphere, in order to better serving their customers. So if universities start the process of educating students who will be entering the workforce, it would be much easier for organizations to successfully apply Total Quality Management principles.

The fifth beneficiary of a better university is Society at large. Students do not live alone in a world of their own; they belong to a larger entity, they interact with each other and with others as well. So building and educating them to quality concepts will drive them to self-improvement on all levels. This in turn will help in improving the Society as a whole. That is a crucial need at the moment especially in our country. Moreover, there is a good chance of achieving this improvement on the social level, especially if we take into consideration the fact that more than 50% of the Lebanese population is less than 25 years of age.

OBJECTIVES

The main objectives of the research can be presented as follows:

1. Proving the need of a Total Quality Management orientation in higher education.

2. Showing ways of improvement in NDU's management and teaching methods.

Lebanon has already felt the appeal of Total Quality Management concepts and principles, especially in Industry and business. Educational institutions are beginning to see the possible benefits to be gained. NDU could set the example of a full implementation, this way we can gain the advantage over the others. Many examples exist regarding the implementation of Total Quality Management in higher education institutions. We could learn from them and of course adapt what we can to our situation. Tremendous benefits are to be gained in the educational field and Society at large.

LIMITATIONS

There are limitations that need to be considered while conducting this research.

First of all, there is the limitation of time. The research aims at studying the current situation at NDU and the areas where improvement is needed. Of course there will be recommendations based on the survey that will be conducted on campus.

However, a full Total Quality Management implementation requires months, if not years before it starts paying off or at least show results. So it will not be possible to evaluate any results for Total Quality Management implementation at NDU.

Furthermore, the concepts of Total Quality Management in higher education will be studied at NDU only, excluding the other universities operating in Lebanon. The suggestions and the conclusions that may be indicated in or drawn from this research will only be

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applicable to NDU. No generalization is to be made here to include the Higher Education system as a whole in Lebanon.

It is commonly known that measuring Total Quality Management's success in an organization is done through sales and profitability, which are indicative of customer satisfaction.

In our case at NDU, sales would be the tuition or the number of enrollments. However, we cannot rely only on these two figures to assess the quality improvement efforts. The reasoning goes as follows:

A student may enroll at NDU because it could be the only place where he/she passed the entrance exam, so he/she will not jeopardize the only chance for an education. So the retention here is due to purely subjective motives; the student may not think that NDU is the best university, but it is the only one available. This reasoning is also applicable when considering the tuition factor; NDU fees are among the cheapest as compared with the universities currently operating in Lebanon, and given the high costs of living, students may find NDU more attractive. Quality considerations here do not play a major role.

So the quality improvement efforts will be more concentrated on the academic level, and on the quality of knowledge that NDU will offer.

The customers to be satisfied here could be the future employers: by recruiting more NDU graduates, it would mean that the teaching methods and quality have improved. The satisfaction of the students themselves regarding what they have learned, whether it is helping them in their life, in their work, etc. is also an important factor.

On the other hand, staff retention, the retention of good professors and lecturers at NDU could be good indicators of the Total Quality Management efforts on the administrative as well as on the academic level. Curriculum addressing and responding to the needs of the

Lebanese society is another good indicator of Total Quality Management efforts to please the customer- in this case the Lebanese society.

METHODOLOGY

The research will be conducted as follows:

The first chapter will be about Total Quality Management in general, the gurus and their basic concepts. As we know, the quality movement started in Japan after World War II. Japanese improved their products in terms of efficiency and cost reduction, thus strongly competing with the American products. Although the "father" of Total Quality Management is an American, it is the Japanese who first saw the benefits of his teachings.

Total Quality Management first started in industry then moved to other types of businesses and now it is the concern of all kinds of organizations. The concern for quality in higher education was triggered by the success it gained in the business sector.

After Total Quality Management in business, chapter 2 will deal with Total Quality Management as applied in higher education:

- What are the concepts adopted?
- What are the changes that need to be done, if Total Quality Management is to be successfully applied in higher education?
- The way it works: by involving all levels, administrative and academic, etc.

Moreover, the efforts undertaken by some universities in applying Total Quality Management will be discussed. Their experience, the results they achieved as well as the obstacles they encountered can only help in the quest for finding the best ways to improve in a higher education institution.

Chapters 3 and 4 will be the case study of the research, which is NDU. It starts with a history of NDU, its philosophy, its policies, structure, operations, etc., then, the reasons why

Total Quality Management should be thought of at NDU, and finally the areas of concern, where improvement is to be considered.

Achieving all this will be through interviews and questionnaires conducted with the department heads, the faculty members, the administrative staff and the students. Moreover, a survey of the needs of some leading organizations and its comparison with what NDU offers will uncover another area where NDU can improve its services to the "customers".

All the steps of the field research will be explained, the difficulties that may be encountered, the limitations, etc.

Then the data collected will be analyzed and some conclusions could be drawn in assessment of the current situation at NDU.

The final chapter will include recommendations regarding the problems raised earlier, and indications for future possible research.

CHAPTER ONE

TOTAL QUALITY MANAGEMENT: A GENERAL OVERVIEW

The quality concept is not a new one. Decades ago, quality was a concern for

organizations. However, it is not until the 1980's that Total Quality Management started to

be considered as the solution for organizational survival. The concern for Total Quality

Management was triggered by the rising competition mainly between American and Japanese

businesses. The American leadership in business was challenged by the growing success of

Japanese products. And as the Americans started inquiring about the secret of such success

they discovered what many already knew about but did not apply: Japanese businesses were

applying Total Quality Management principles, based on the teachings of W. Edward

Deming, an American statistician seconded to Japan in 1950 to help in the revival of the

Japanese Economy.

After World War II, American businesses were practically without competitors and

they had to tailor to the market demand, so the focus was on quantity rather than quality. On

the other hand Japanese businesses realized that they needed radical changes in order for

them to stand up again and compete in the global market. So the Japanese managers

understood what the Americans did not: quality not quantity improves profits, sales,

productivity, and gives a clear competitive edge (Aguayo, 1990, 4-5).

The "Fathers" of Total Quality Management

As we speak of Total Quality Management, we cannot but mention the famous quality

expert W. Edward Deming. He was one of the "milestones who set the broad lines of Total

Quality Management". Along with Deming, we have to mention among others, Malcolm

Baldrige, Joseph Juran and Philip B. Crosby for their major contributions to the quality

concepts (Saliba, 1998, 20-21).

According to Edward Deming, "quality must be the foundation of everything

businesses do" (Kermally, 1996, 42). The Japanese industry fully adopted this belief and

they established in 1951 the Deming prize for quality. This prize is granted to "... a company

or individual that or who has actively contributed to the spread and development of statistical

techniques for quality improvement" (Logothetis, 1992, 28). Winners of the Deming prize

include companies like Nissan, Toyota, Hitachi, Sony, etc. Deming has set 14 principles for

successful Total Quality Management implementation; those principles require the

organization to have a constant "purpose for continual improvement, to institute on-the-job

training, to adopt modern methods of leadership, to focus on quality not quantity, and to

define top management's commitment to quality. These 14 principles constitute the

Operational Theory Management" (Saliba, 1998, 21).

The criteria and principles established by Malcolm Baldrige "define the new

management model because they provide the best guide for understanding, assessing,

controlling and improving your organization". These principles cover all the aspects of an

organization and help it reach success through "the philosophy of continuous improvement

and search for excellence" (George & Weimerskirch, 1996, 5).

In 1987, the Malcolm Baldrige National Quality Award was established, in order to

annually recognize U.S. organizations adopting quality improvement strategies, and having

achieved a distinguished performance in profitability and market share. The most important

criteria examined by the Baldrige Award are Leadership (90 points), Information and

Analysis (75 points), Human resources development and management (140 points), quality

and operational results (250 points) and customer focus and satisfaction (250 points).

Companies like AT&T and Xerox have already earned the Baldrige award (George & Weimerskirch, 1996, 5).

Joseph Juran believes that quality should be a way of life to be adopted by each human being. To him, quality is "… fitness for use, which demands quality of design, quality of conformance, availability and adequate field service … and objectives should be set yearly for increased performance and decreased costs" (Logothetis, 1992, 64). Joseph Juran is know to have addressed 3 aspects of quality:

- Quality planning.

- Quality control: detecting and correcting mistakes as soon as they occur, in order to maintain stability.

- Quality improvement or breakthrough: it can be achieved through 10 steps, mainly summarized by planning, setting targets, organizing, training, communication and recognition. All this cannot be performed well without the total commitment and understanding of top management (Logothetis, 1992, 65).

To Philip Crosby, there are 3 distinct management attitudes:

- Determination: Top management should take the lead in order to make the organization competitive in this new economic age.

- Providing education for managers who in turn will educate the other employees and lead the way.

- Implementing the quality system by creating a motivating atmosphere, providing guidance for continuous improvement and involving everybody in the process.

Crosby's aim is "zero defects" outcomes; in another way, "do it right the first time".

Like Juran and Deming, Crosby believes that management has the greatest responsibility in adopting Total Quality Management principles, and that all levels should be

educated about quality. In general, according to Crosby "what needs to be done first is to educate people and at the same time to familiarize management's commitment, measurement and awareness" (Logothetis, 1996, 89).

Applicability of Total Quality Management principles

Any business wishing to adopt a Total Quality Management strategy must consider the following requirements:

- Customer focus strategy: Customers are the main targets of Total Quality Management, more specifically, their needs and demands are.

- Employee empowerment: "Employees who have been trained, empowered, and recognized for their achievements see their jobs and their companies from different perspectives. They "own" the company in the sense that they feel personally responsible for its performance". This feeling of ownership is suggested to incite employees to become committed to quality and continuous improvement (George & Weimerskirch, 1996, 81).

- Involvement of all operations: In order to be effective and efficient, quality must cover all departments, sections and hierarchical levels.

- Involve customers and suppliers: Involving customers will allow the company to find out about their expectations, and thus it will try to exceed them. Moreover, to deliver a high quality product or service, the company needs the full assistance of its suppliers and their commitment to quality (Saliba, 1998, 26).

- Performance measurement: This is a crucial step in Total Quality Management. It is important that the company finds out whether objectives are being met, and how they are being achieved. "Performance can be focused on processes, products and people (customers and employees). Unfortunately, in practice, many organizations focus on the

financial performance of the organization and pay very little attention to processes and people" (Kermally, 1996, 182).

- Teamwork: While working in teams, employees will sum up their efforts and can achieve excellent results. This will in turn enhance employee spirit and customer satisfaction (Saliba, 1998, 27).

- Continuous improvement: Masaaki Imai, one of the Japanese pioneers in Total Quality Management, presented The "Kaizen" concept. "Kaizen means continuous process improvement involving everybody. The Kaizen improvement is by definition a long-term long-lasting improvement, the result of a team effort; it is process oriented and actually requires little investment, but great effort to maintain". In a highly competitive environment, continuous improvement can give the organization the edge over the others by exceeding customers' expectations (Logothetis, 1992, 90).

- Willingness to change: From what was mentioned so far, it is obvious that adopting a Total Quality Management orientation requires some radical changes in the ways business is done; there should be changes in the perceptions (how employees look at customers, top management, suppliers, performance, etc.). So, Total Quality Management can become a barrier when there is resistance to change. To succeed in making changes, the new concepts must be introduced gradually through training programs. Moreover, a new culture must be built, one based on total involvement, teamwork, job security and customer and employee focus directives (Saliba, 1998, 28).

- Upper management commitment: If the people at the top are not fully convinced by the need to follow a quality-driven policy, then there is no way they can convince their employees to adopt the change. They should give the example and thus convince the workforce that they are serious about quality and that they expect the same attitude from all employees (Logothetis, 1992, 5).

CHAPTER TWO

TOTAL QUALITY MANAGEMENT IN HIGHER EDUCATION

After its success in the business world, Total Quality Management began to sound appealing to many types of organizations, among others, higher education institutions.

Success alone may have not been enough; some institutions were facing some problems, so they thought of the quality principles as possible solutions for their problems. Therefore, higher education institutions began to feel the need for Total Quality Management, whether they had problems or not. Total Quality Management is not just a solution to a problem; it is a way of life that if adopted can yield extraordinary results on all levels.

The need for Total Quality Management in higher education

Since World War II, the number of universities has doubled, and faculty has quadrupled. Faculty turned from common interests to their own self needs. They were focusing more on their own development rather than that of students. They favored the pursuit of their own research projects, "their own definitions of purposeful work" (Ruben, 1995, 104).

"The irony is that while administrative units have become more like academic departments -more committed to group processes and collective decision making- more and more faculty have become independent contractors largely unfettered by the constraints of institutional needs and community practices" (Ruben, 1995, 104-105).

On the administrative level, many unnecessary processes were identified. These processes resulted in increased administrative staff and extra costs.

There are many aspects to be considered when running a university: legal aspects, certifications, etc. Every decision has to be approved through a series of procedures, thus requiring a lot of time and more administrative staff.

Moreover, when state agencies (for public sector) and board of trustees (for private sector) interfere and demand to be kept informed, it means more paperwork, procedures and more administrative staff, without substantial improvements in product quality. So there is easily room for inefficiency, duplication and waste (Ruben, 1995, 100).

Other considerations included the dissatisfaction over the increase in tuition costs without any additional value in return. Graduates were complaining about the lack of job opportunities for them in the working place, and they were asking questions that put the education they received at stake. There were also questions about the productivity of faculty members and the degree of their accountability; were they doing their best, was it enough, etc. Businesses were complaining about the poor preparation of graduates to the real working world. And the list goes on (Ruben, 1995, 1).

Important ideas in the adoption of a quality improvement approach

<u>Customer focus:</u>

Customers are both internal and external. In the earlier days, quality meant, "zero defects"; nowadays, quality is what the customers say it is. An institution's quality is a function of its contributions to student learning (Ruben, 1995, 138-139).

<u>Continuous improvement:</u>

In this very competitive world of computers and fast moving technologies, failing to push the boundaries of quality can be very harmful and fatal. There should never be a point where one can say we have achieved the highest level of quality; there is always room for more, for improvement (Ruben, 1995, 139). Quality improvement is a never-ending journey: "Ratcheting" is to set a quality target, improve the product to achieve the target, then reset the

target to a higher quality level and so on. The new target should be "aggressive" but not unachievable (Ruben, 1995, 177).

Management by fact:

First of all, it is essential to have a strategy, especially in providing directions and synchronization in the implementation of the quality principles (Ruben, 1995, 175). Moreover, a major idea here is to "be clear, keep track and use data to improve". Always follow up the way things are moving, dig out the problems or causes for any malfunction and spend time on it. This systematic approach may be new to the academic administration used to a more informal atmosphere (Ruben, 1995, 140).

In addition, there should be continuous assessments of the process, and see how things are moving on. In higher education, progress is measured on issues like the registration waiting time (registrar), the response time to a service request, to a maintenance cost (physical plant), the response time to an application (admission department), the retrieval of published items, the response time to a request (library), satisfaction with staff services and response time (human resources), satisfaction with food quality, variety and service (food service), the feedback between students and teachers (through papers, exams and the evolution of grades, etc.). There should be regularly scheduled reviews; they show management's involvement and its concern (Ruben, 1995, 177-178).

Benchmarking "the systematic search for best practice":

This process is practically inexistant in higher education institutions. Each institution sees itself as unique and does not consider the fact that somewhere else they could be doing things better in some practices. It is not surprising to see companies and sometimes, entire industries collaborate together in benchmarking for mutual improvements, a very rare phenomenon in higher education (Ruben, 1995, 141).

<u>People:</u>

Employees are the key resources in the search for continuous quality improvement in every

institution. In order to achieve Peter Senge's "learning Organization", leaders must provide

vision, strategy, coaching, and must have to encourage the team spirit.

Higher education institutions need effective decision-makers, with the authority to make

changes and to be accountable for those changes.

On the academic level, this means empowering the department chairmen. This will create

ability and willingness to easily bring changes to the personnel without worrying about

institutional politics. Moreover, there should be a shift in the focus of incentives, from

individual faculty members towards their departments, divisions and schools. With collective

rewards, and for the quality of instructional programs, departments will allocate resources in

a way to achieve better results (Ruben, 1995, 106).

"In Total Quality Management 85% of the problems that arise in the course of work are

attributable to the organization's systems; just 15% to the shortcomings of individual

employees". So it is management's job to improve systems and create an atmosphere where

employees give their best. Big companies like Motorola and General Motors spend a great

deal on their employee's education, training and development, whereas it is rare to find that

in universities and colleges, which are supposed to be "organizations devoted to learning"

(Ruben, 1995, 141-142).

Quality-related training is essential when preparing employees to the shift in culture.

Recognition is another essential motivator for sustaining continuous improvement. And

finally, communication is a vital instrument; status and achievements should be

communicated so that everyone knows the direction that the organization is taking and the

reason for that (Ruben, 1995, 178-179).

<u>Organizational structures:</u>

Work has to be organized around the needs and preferences of customers, not those of the corporation or its employees. All departments must work together in order to provide customers with what they need and even exceed their expectations. In higher education, cross-unit collaboration in the form of student advisement and general education needs to be done well in order to provide students with good quality services (Ruben, 1995, 142).

Critique of quality in higher education

Traditionally, quality was when products reached the standards of excellence determined by experts of the industry in question. The modern definition evolves around customer expectations, requirements and value. The main challenge would now be to determine how well customers' expectations are being met, and where can improvements be introduced (Ruben, 1995, 159). So the first step should be to determine who the customers are, what do they need and expect and how is their value system.

Traditional versus contemporary quality approach in higher education:

Traditional quality approach	**Contemporary quality approach**
Determine vision, mission and goals.	Assess customers' expectations.
Assess organizational performance.	Assess performance.
Identify gaps.	Identify gaps.
Plan improvements.	Plan improvements.
	Integrate changes.

The traditional approach relies largely on the professional judgement of higher education "insiders". Quality was to improve areas those "insiders" judged below the required standards (Ruben, 1995, 160). This approach has created some side effects problems like:

- Failing to take into consideration the expectations and requirements of customers, i.e. students, parents, etc.

- Increase in costs without corresponding rise in value.

- Inefficiency, waste and unnecessary bureaucracy.

- Little or no interest in meeting educational needs of the contemporary workplace as defined by employers.

- Preoccupation with "internal" definitions of quality.

- Too little effort in measuring teaching processes and outcomes quantitatively.

- Insufficient accountability.

- Short-term planning and reactivity versus long-term planning and proactive anticipation of needs.

- Defensiveness, denial, deflection, rigidity, resistance to change and smugness in the face of environmental, societal and marketplace needs.

Examples of problems are limited parking, difficulty enrolling in required or desired courses, and uneven level of courtesy and concern shown by faculty and staff, undefined course and instructor requirements, inadequate classroom facilities, courses required in sequence with content that is uncoordinated, extensive delays in providing feedback on classroom performance, and so on.

It may be that these problems do not all occur at the same time and place, but they do occur and that causes criticism to be more and more frequent (Ruben, 1995, 162).

The contemporary approach allows for taking into consideration and acting upon the expectations and needs of the beneficiaries of educational services, namely students, parents, future employers, etc. In the traditional approach, faculty members decided what students,

parents, future employers, etc. needed. As a consequence of this new approach, faculty

arrogance and institutional insensitivity became substantially limited, if not non-existent.

However, relying on the "customer-driven approach to curriculum development and

delivery" can have some drawbacks:

- Students (and other stakeholders) may not necessarily require or be delighted in courses

  that push their thinking beyond familiar limits; they may not want to assume this new

  high level of responsibility.

- To what extent can we rely on expectations and requirements of students (as consumers),

  as indicators of quality?

- Will students, parents, employers, etc. be able to determine if a course or the instructor is

  effectively preparing them for subsequent courses? For the workplace? For graduate or

  professional school? For community and family life today and in the coming decades?

  (Ruben, 1995, 163)

Students and other "consumers" of higher education services do not always know

what is in their best interest. Most students, when asked about their most memorable

experience at university, rarely mention anything that has to do with the academic elements

of that experience. This leads to the fact that it is very important to better understand the

"student-as-customer" and the nature and complexity of the learning experience. On the

other hand, one cannot but realize how students cannot fully assess the quality or value of the

professional and technical services they receive. So, customers' expectations and

requirements are not sufficient indicators of quality (Ruben, 1995, 164).

The traditional approach to quality has limitations when applied in higher education;

however, we should not forget that this traditional approach has produced the world standards

in industry. Moreover, the contemporary approach is not an easy one to implement both in

industry and higher education. Therefore, a combined model using the 2 approaches was suggested:

Determine/Review vision & mission ⟷ **Assess Expectations**

Assess Performance
Identify gaps
Plan improvements
Integrate changes
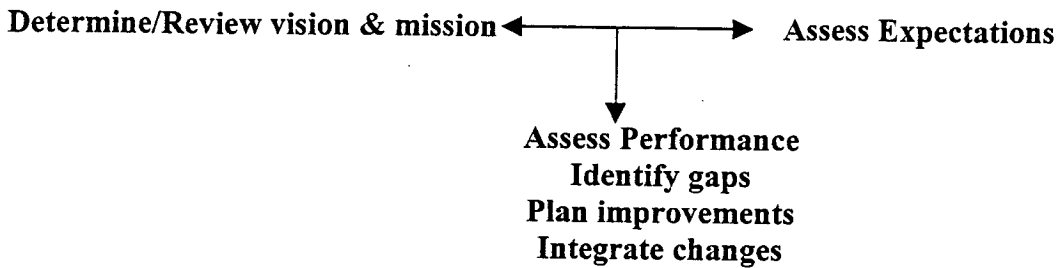
The emphasis would be here on the quality assessment of the internal vision/mission on one hand, and the external constituent expectations/satisfaction on the other, and the relationship between the two views (Ruben, 1995, 165-166).

This approach helps differentiate three types of quality gaps:

1. Between **vision/mission** and **performance**: the vision or mission might reflect a certain view, while performance indicates the opposite (Ruben, 1995, 165). For example, there may be a lack of communication that may isolate administrators, faculty and staff and therefore miss on some meaningful dialogue (Ruben, 1995, 168).

2. Between **expectations/satisfaction** and **performance**: for example the dissatisfaction of students for not being able to register in an overbooked class, or the expectation that all courses would be taught by excellent faculty members (Ruben, 1995, 166). This may be the consequence of inadequate communication, work processes or both. Dissatisfaction due to limited openings in courses can be in theory reduced by changes in the work processes. However, this may not be feasible in the short-run, so students (and parents) must be informed about what to expect; this is done through effective communication so that students and parents may anticipate any situation that they might find unpleasant (Ruben, 1995, 168).

3. Between the **vision/mission** and the **expectations/satisfaction** of students: the "who we are" or "who we want to be" may not match what is expected of "us" (Ruben, 1995, 166).

These gaps can be traced to the inadequate explanations of the nature of the institution to its customers.

The gaps identified above may well result from problems in the internal performance of the university. Problems like long registration lines, inadequate recruitment are a good example. These problems could also result from communication problems. So in those cases the solution would be to improve work processes, systems, procedures, policies, communication and information process, etc (Ruben, 1995, 167).

Real life examples of Total Quality Management applications in some universities

It is undeniable that the pursuit of quality does not come without flaws. There is an important difference between design quality and implementation quality. "Design quality must be measured against the task at hand". Being overly concerned about design quality may be much more than it is required to perform the task at hand. This could be very costly in terms of effectiveness and efficiency. Sometimes the simplest way is the best way (Ruben, 1995, 115).

Some people might argue that the reason Total Quality Management worked well in some companies is that they had no other choice; it was either that or closing down. And since in higher education, this is not the case, Total Quality Management will not work out (Ruben, 1995, 142-143). No doubt there will be skeptics and people opposing the process; this brings to our attention a famous quote by **Machiavelli**, from *The Prince*: "There is nothing more difficult to carry out, nor more dangerous to handle than to initiate a new order of things. For the reformer has enemies in all those who profit from the old order and only lukewarm defenders in all those who would profit by the new order."

Following is a series of real life experiences undertaken by some universities that decided to adopt quality improvement principles.

The example of The University of Maryland:

In 1990, the president saw the benefits of Total Quality Management in the private sector. As a result, top management spent 12 months training about total quality. And it was decided to adopt the approach, given the problems they were facing: budget cuts, customers demanding quality service like registration, and advising in the academic support function. State legislators were demanding accountability, businesses were transforming into quality driven enterprises and enrollments were decreasing.

One year later, in 1991 the president appoints a broadly representative planning committee to develop a strategy for implementation. In addition to the administrative functions, the plan focused on academic and pedagogical processes. The committee included representatives from the administration, the academic departments, customers (students, alumni, etc.) and the dean of engineering was its chairman.

The implementation process started gradually with units initially involved in Total Quality Management efforts. They volunteered the training and support for all the others. Over time, each vice-president became accountable for improvements within his/her division. At the same time, the top management team formulated a vision with measures of quality for each goal of the university. The "continuous quality council" chaired by the president, planned the quality agenda of the university and evaluated progress against measurable yardsticks. Change agents were identified in each unit applying the total quality principles; they received "facilitator" training and supporting materials. In turn they served as unit facilitators in charge of keeping the process moving. Periodically, they received help from a small unit on campus, "the central office for continuous improvement".

A critical success factor in this process has been the partnerships with corporate "friends" of the university who themselves were benchmarks in the implementation of total quality. Examples include IBM, Xerox, AT&T and Westinghouse who allowed the university to borrow their training and implementation approaches, thus saving a lot of time.

Quality principles were applied to the teaching and learning processes. This application was facilitated by a fully interactive, electronic (computer-based) classroom called a "virtual classroom" for its ability to take advantage of any worldwide teleconferencing opportunity. Many of the quality pilot processes have been very successful. Of course there have been some failures, mainly due to the lack of the right leadership support, or facilitator assistance or realistic improvement goals (Ruben, 1995, 247-249).

At the university of Maryland, the quality principles implementation has generated some important lessons about what works and helps on one hand and the challenges that must be faced on the other. They are discussed in the following paragraphs.

Lessons learned: what works and helps.

- *Discussing language and philosophy*: debating the applicability of Total Quality Management in academia. Those debates are as inevitable as they are necessary. They are an important step in the process of reaching a comfort level with quality concepts that, once dealt with, no longer pose a barrier.

- *Involving the academic core*: faculty members are the soul of the institution, therefore without their participation, the quality improvement efforts are useless. What is the use of improved administrative functions when the academic level is not satisfactory. The university services will not be sought after for just the administrative qualities of the institution.

- *Introduce total quality incrementally* in order to minimize opposition from skeptics, and damages in case of failure.

- *No "guru" model*: there is no best approach to the whole process and its implementation. A combination must be used, tailored to the needs of each individual institution.

- *Setting realistic expectations*: when setting the goals to achieve, they have to be realistic and reasonable; if they are not, then people trying to reach them will only feel discouraged and the whole process would fail. Goals must evolve gradually; first set relatively easy goals, then start by moving up the quality scale. This will help keep the morale high and motivation running.

- *The president's involvement and continuing focus*: there is this saying by John Le Carré, in *The Russia House*: "If we see one goal clearly, we may advance one step. If we contemplate all goals at once, we shall not advance at all."

- *Appointing a senior total quality advocate*, who will provide counsel regarding the total quality direction for the campus; it could be many persons, an office for example (Ruben, 1995, 250-253).

Lessons learned: what are the challenges?

- *Continuing budget crises*: Economic difficulties and job insecurity have bad influence on people's performance. If they have guarantees that there will be no job losses, employees will work better and their creativity will be unleashed. So there will have to be a way to preserve the employees without disregarding the primary goal of the whole process, i.e. quality improvements.

- *Agreeing on the "customer"*: University groups may disagree on the identity of "The" customer. The multiplicity of customers is easily dealt with when their interests "magically" converge; however, this is very rare, if not impossible.

- *Avoiding measurement*: Most universities are not disciplined in accountability processes. Measurement of performance against customer requirements is the only good solution to improve as the university attempts to move forward.

- *Re-engineering teaching and learning around total quality*: Total quality is not intended to compromise academic goals and standards. It is intended here to improve the learning process between teachers and students, and to stretch the goals of learning. Hearing students' comments and suggestions is a good way of doing that. There should be a shift from the "inspection mode" of giving quizzes and tests emphasizing memory and recall, to using tests and papers as value-added learning and knowledge-integration opportunities.

- *Becoming a total quality student*: Improvements in learning and teaching processes cannot occur unless students become partners in this total quality journey. They need to see that their opinions are taken into account, and they must be respectful to their fellow students and professors. However, students must be told when their suggestions are not feasible to implement or if they require more analysis. Suggestions cannot be implemented all at once, or at least sometimes not immediately; so it is important that students know where to stand. Moreover, getting students to be involved in the total quality process must not make them set unrealizable expectations, in order to avoid subsequent frustrations.

- *Encountering the university's core values*: Some people might refuse the changes suggested by the new total quality culture. Some of the university's characteristics may pose challenges to culture changes, like at research-oriented universities where the reward system emphasizes research rather than teaching.

- *Waiting for unanimous support*: No cultural change is ever unanimous. However, that should not cause reticence or abandonment of the whole process. There will always be

individuals who will refuse to consider any changes to their already pre-established norms of life and behaviors (Ruben, 1995, 253-257).

The example of Northwest Missouri State University

The principles that guided the approach at Northwest were the following:

Benchmarking. Robert Camp defines benchmarking as "the (continuous) search for ... (the) best practices that lead to superior performance" (Camp, 1989, 12).

Benchmarking is very important for 2 reasons: first it raises expectations, and that is how quality can be built gradually; if there are no benchmarks, goals tend to be modest in order not to change the status quo. In order to avoid inertia on campus, a university must always compare itself to others and see how it can outperform them (Doherty, 1994, 135).

Applying the principle of parsimony. This principle can be applied in order to avoid the pursuit of trivial goals but rather focus on the important ones. Sometimes, "the perfect design is associated with the assemblage of the fewest parts," Dr. Nam Suh (a professor of engineering at MIT) once said. So focusing on a relatively small number of important issues makes it easier to perform them very well. Adopting a focused mission statement will get the university to easily operate by the mission. For example Northwest University committed itself to "place special emphasis upon agriculture, business and teacher education, particularly as these professions contribute to the primary service region".

A sharpened mission will imply more focused goals that reflect the basic values that the university lives by.

To continue in that same context, the principle of parsimony can be applied to the organizational structure. Usually, when corporations adopt Total Quality Management approaches, they tend to flatten the organizational structure. The major driver of this is probably cost reduction. However, when eliminating layers in the structure, employees will

be more involved in the definition of quality and the way they have to manage their jobs in order to reach it. "Reducing the number of administrators frees up decisions which can then be pushed down". Another benefit to a flatter organizational structure is that this new structure will reflect the mission more sharply (Doherty, 1994, 136-137).

Focus on the customer. In the classroom, students are workers and instructors are the supervisors; they both are the suppliers of knowledge, which is the product. This product is destined for customers, i.e. the future employers and graduate schools.

Instructors and students co-operate in order to satisfy the customer. Moreover, students are involved in the design and evaluation of the course, thus assuming more control over their education. Outside the classroom, the students are the customers, in the typical sense of the word (Doherty, 1994, 138).

Assessment of prevention. In the traditional ways, putting inspectors at the end of the assembly lines did the assessment of quality. In other words, inspectors had to check the products after completion. This process has proved ineffective for several reasons:

- It is very expensive, due to the cost of damaged goods, cost of rework, the waste of time and raw materials, etc.

- It makes the line workers feel that they cannot be trusted to do the job right from the first time. So they will lose any aspirations and expectations for improvement.

- It creates a negative feeling among workers thus making them drift away from their management so that they become like a totally different group.

The substitute for this old model would be prevention. Prevention is strongly recommended by Total Quality Management pioneers as Crosby and Deming. According to Deming, organizations should "eliminate quotas or work standards, and management by objectives or numerical goals, and substitute leadership" (point # 11 of Deming's 14 points). Usually,

assessment is done so that employees or students be sorted and ranked. Therefore, they tend

to work hard to find ways to adapt to this system, neglecting any concerns for quality.

In higher education, the system is very much like the "supervisory" aspect in industry. The

assessment is the evaluation at the end of the term which objective is to grade students, not

prevent failures. Therefore assessment should be concerned with improvement and ways to

reach it, not just sorting and ranking (Doherty, 1994, 139).

Northwest University has incorporated 2 approaches to assessment in its quality culture plan.

Freshmen students join university earlier for a weeklong orientation. During that time, they

are introduced to the quality culture and they are tested in different dimensions using

combinations of tests. The results help placing students in the right classes and are to be used

later to measure progress.

At the end of the sophomore year, the same tests are re-administered by some departments

before students are formally admitted to higher levels. The benefits of this system can be

summarized as follows:

- Problems could be ameliorated or resolved before it was too late.

- Freshmen were more concerned about their education and they actually looked forward to

  the tests in order to see how they have evolved.

- Creation of a "more homogeneous upper-division environment", facilitating teaching of

  "high-order skills like analysis, synthesis and evaluation".

This approach resolved the problems that some senior students face when they have to pass

the comprehensive test before graduation. Some students spent 4 years at college earning

satisfactory grades and yet they would find difficulties in the senior standing test.

At graduation, additional tests are given in order to evaluate the program's effectiveness.

Five years later, alumni are surveyed in order to get an additional and different perspective on

how to please the "customers" (Doherty, 1994, 140).

<u>Improving teaching and learning</u>

Derek Bok suggests that testing methods are determinant of students' study habits. Most

students, when starting a new course, ask about the testing methods; they inquire from the

teacher and from previous students of the class. If tests require understanding and recall, they

don't have to use analytical skills, just their memory; and the opposite is true.

"Few college instructors have ever systematically learned how to construct questions which

test to different cognitive levels". Accordingly, faculty development at Northwest University

was focused on that area. Specialists were brought in for that matter and there was a high

level of participation. As a result, the quality of teaching was improved and students began

having higher expectations (Doherty, 1994, 140).

Training. It is impossible to apply Total Quality Management without training. Training is

not an end by itself, and success should not be measured by the number of participants in the

training sessions. Northwest University has emphasized this aspect and participated in many

conferences and videoconferences (Doherty, 1994, 141).

Total Quality Management in the support services. The traditional way of applying Total

Quality Management in universities has been by starting with the support services and

expecting the academic people to follow. However, the academic part is what differentiates

the university: Education is what the university produces; it is the main product. So it makes

more sense to start with the academic level; then the support services will follow easily and

willingly. And that is what happened at Northwest University (Doherty, 1994, 141).

Continuous quality improvement. Continuity of the process is the basic belief in the Total

Quality Management "faith". One can never claim to have achieved everything and reached

the end. The process is never ending. At first, the implementation does not take place all at

once; some areas start before others. Testing and making adjustments or improvements are

inherent parts of the process, and we know that in the search for excellence there are no limits (Doherty, 1994, 141).

THE RESULTS OF TOTAL QUALITY MANAGEMENT AT NORTHWEST

The results of Total Quality Management could be measured by the following characteristics:

- Availability of electronic facilities like computers, Internet access, software, etc. enough to cater to the needs of the students.

- Improvement in the projects submitted, denoted by more depth in research, a thorough scanning of many sources, etc.

- Additional studying period.

- Extra-curricular intellectual and enriching activities. Combination with learning activities.

- Establishing service centers where students can transact most of their business at one single place.

- Improved registration process: where it will be done from the advisors' offices in a few minutes instead of hours or days.

- Assessment program: using multiple measures to evaluate student attitudes and performance.

- Providing special workshops for technical skills for example in note taking, how to use a textbook as a learning tool, etc.

- Evaluating students regularly, for example at the end of each level year (sophomore, junior, senior) in order to determine progress and evolution.

- Establishing workshops to assist faculty in developing new strategies for extending writing, thinking and listening skills across the curriculum.

- Encouraging faculty to experiment alternative teaching and learning strategies.

- Adopting comprehensive senior exit programs.

- Assisting faculty members who lack experience in teaching at a university level.

- Establishing a good faculty evaluation system.

- Creating dorms with all the facilities.

- A good library with all facilities needed: space to study, availability of reference books, good atmosphere for research or studying, proper equipment, computerized system, regular arrivals with the latest references, etc.

In short, what we learn from these two institutions can be summarized as follows. A successful Total Quality Management implementation is achieved by following a step-by-step approach, and setting realistic and achievable goals. Applying quality principles cannot be done without involving the academic functions, without providing the proper support services and facilities that will enhance the learning process, and without an open communication atmosphere that allows room for discussions and debates. Partnerships with business entities already familiar with quality principles and techniques can be of great help. Having a committed top management is a very important factor. Institutions should not be afraid of admitting their weaknesses and should use benchmarks where applicable. Moreover, there should be a focus on a narrow range of reachable targets, rather than on a wide range of unachievable targets. Faculty development is essential in order to have a better quality of teachings and therefore a better quality of students. Students must be well oriented and guided throughout their college years, with continuous evaluations of their performance and measurements of their progress; prevention is much more effective than correction.

However, creating a quality-driven institution does not come without challenges. Some of those challenges include the budget constraints, creating quality students, agreeing

on the "customer" and refocusing the teaching and learning processes around the needs and expectations of this customer and finally overcoming the barriers that the skeptics may throw in order to hinder the whole process.

Classroom example from the University of Wisconsin-Madison

The next example focuses on introducing quality improvement concepts into the college classroom. The study is based on the experiment of W. Lee Hansen, teacher of an economics course at the University of Wisconsin-Madison.

"To learn is to change. Education is a process to change the learner." (Leonard, 1968).

Most Total Quality Management activities in higher education have so far been focused on the administrative level, and on the academic level in terms of providing programs that will be useful for students in their future working life. However, more can be done: applying Total Quality Management in classrooms and getting students to realize their full potential for learning in all courses (Doherty, 1994, 149).

The challenge in higher education is to put down a strategy where top management provides leadership for all sections regarding the implementation of total quality improvement. Moreover, this strategy will have to draw the attention of the "independent-minded faculty members", in order to get them to accept the new quality concepts. The difficulty in getting faculty members to adopt the quality principles springs mainly from their "privileged" status in the university they are in. They are more like "self-contained production units".

It is difficult to impose Total Quality Management principles on the academic level. Individual faculty members are the ones who know best what is being taught and the way it should be taught, better than colleagues, department heads, presidents or board of trustees. So faculty members must be convinced of the "virtues of total quality improvement" before they will consider applying its principles (Doherty, 1994, 150).

Customer focus

Immediate customers are students; the real customers are employers, parents and society at large. Customers want to see that graduating students have acquired a substantive amount of knowledge of the major they studied, that students know how to use this knowledge and that they contribute by their education to their organizations, communities and to society. Students must accept the fact that they are customers to their own knowledge. Once students accept this view, it would be easy for them to work on improving their knowledge in order to get a better "product" (i.e. better education). So they will see themselves as customers for the teachers' instructional services, which they must have in order to develop their skills (Doherty, 1994, 154-155).

Student Involvement

It is very typical to see that faculty members find it easier to give lectures than to start discussions with their students. This way, they are denying students the opportunity to think broadly and more deeply about the subject at hand. Although it has been proven that students benefit more when they engage in discussions, the trend is still mostly towards lecturing (Doherty, 1994, 155).

W. Lee Hansen identified five essential skills that might be expected of graduating economics majors. They are mainly:

- Gaining access to existing knowledge through search and inquiry.
- Displaying command of existing knowledge through summarization.
- Displaying ability to draw out existing knowledge through reading interpreting and analyzing printed materials.

- Utilizing existing knowledge to explore issues: preparing analysis reports and eventually recommending a course of action based on the analysis presented.

- Creating new knowledge by conducting research projects and exploring new issues.

The first 4 skills are addressed somehow by the adoption of small discussion groups in class. However, the fifth skill i.e. "creating new knowledge" cannot be nurtured unless research projects are conducted and this can be done by assigning groups of students to work on a same topic (Doherty, 1994, 155). So we go to the bottom line and that is student involvement.

Continuous improvement

Under the conventional approach to instruction, it is difficult to assess how well "customers" needs are being met. Two or three exams within the term do not give an objective and clear idea about this; it cannot be concluded whether the students have improved or whether they have studied very hard and memorized the material, disregarding possible problems that may exist between students and professors. Moreover, end-of-term assessments serve to improve next term's course, but do nothing to the current course. Therefore, continuous assessment is the key. Giving assignments frequently allows instructors to have a better idea regarding the students' learning abilities. There are two possible forms of continuous assessment. One is a series of assignments that gradually increase in complexity. As students acquire more complex knowledge and higher level skills, it means that they have mastered what necessarily preceded that level. The other form consists of an ongoing feedback program regarding the effectiveness of both the instructor and the course. This ongoing process allows instructors to deal in a quick and effective way with any possible real or perceived problem. This evaluation process helps in building a closer relationship with students (Doherty, 1994, 156).

As a result, the focus on creativity and the discovery of new knowledge made the course more stimulating and challenging to students. Moreover, working with students as team members provided an opportunity to know them better and observe closely what they were learning (Doherty, 1994, 171).

CHAPTER THREE

CASE STUDY: NOTRE DAME UNIVERSITY

The Historical Background of NDU

Almost 30 years ago, the Maronite Mariamite religious order was established. One of

their basic goals was to spread culture and education within the Christian values. This was

achieved through the establishment of different schools in Lebanon, the Arab world and in

other foreign countries where the order has affiliates. In Lebanon, those schools are:

- Notre Dame Louaize School established in Zouk Mosbeh.

- Mar Abda School established in Deir El Kamar.

- Sainte Rita School established in Dbayeh.

In the same context, the idea of establishing a university that will carry on the order's

mission began to appeal to the religious leaders of the order.

Furthermore, the events that started in 1975 led to a major deterioration of the overall

situation in the country. The conflicts gave rise to religious discrimination.

The order, led by Father Boutros Fahd, felt the need to pursue their mission of

providing education especially to those students who could not travel between the various

Lebanese areas. Furthermore, the devaluation of the Lebanese currency led to a major

deterioration in the economic situation. Due to that, many parents could not send their

children abroad to have a college education. All these factors made it more urgent to find a

quick solution.

In that spirit, Father Bechara Rahi, president of Notre Dame Louaize School at that time, thought of a way to preserve the students' right for education without being offensive to anyone.

As the eastern region lacked universities following the American system, negotiations started with Beirut University College (Currently Lebanese American University) for it to establish a subsidiary in the region, jointly with the religious order. This was achieved in 1978, and the "Louaize Center for Higher Education" was born, under the blessings of all the religious leaders concerned. The center was located in buildings that were part of the Notre Dame Louaize School.

However, the place soon became too crowded to receive all the students, the teachers and the administration. Plus there was the fear that the proximity between college students and school students would cause frictions and problems.

All these issues brought the head of the center to seek another location; this is how what is now called the "Old Campus" was chosen. It was acquired on a rental basis from its owner, Raymond Salha. It was the best solution at that time, since the number of students did not exceed 100 and there were few offered majors.

Soon after that, the Mariamite Order started working on getting an independent license to establish a university of its own. They wanted an independent institution, believing in the Catholic spirit and adopting the American system.

Once all the paperwork was done, the Order was able to persuade the Lebanese government to grant them the legal license for the university. The president of the Lebanese republic promulgated the decree number 4116 on August 14, 1987, granting the right to operate an independent university. NDU was thus born (Mattar, 1999-2000).

Prominent persons were contacted to form the board of trustees to oversee the academic and the administrative operations of the university. The board is responsible for

drawing the broad lines of the university's policy and to help in the planning of its development.

In 1992, an off-campus program was established in Chekka, offering some of the undergraduate programs available on main campus. In 1999, the new campus in Barsa, Kura was inaugurated; this new campus now offers a wider range of programs.

Also in 1992, the graduate program was established. The Master degrees offered were in computer science, business administration, international affairs and diplomacy, English literature, applied linguistics and TEFL and Arabic language and literature.

In April 1994, the faculty of Engineering and Architecture was established. The Lebanese government acknowledged this new faculty with decree number 9278 on October 5, 1996.

In 1999, the university moved to the new campus, overlooking the Nahr El Kalb valley. The campus is still under construction, however the major parts are finished.

The university is a member of the following associations:

- Action Chrétienne en Orient, Strasbourg, France.

- Association of Catholic Colleges and Universities, Washington D.C., USA.

- Association of International Educators, Washington D.C., USA.

- Association Internationale des Universités, Paris, France.

- Comunità delle Università Méditerranée, Bary, Italy.

- Council of Independent Colleges, Washington D.C., USA.

- Fédération Internationale des Universités Catholiques, Paris, France.

- Federation of Arab Universities, Amman, Jordan.

The Faculty of Business Administration and Economics is a member of the European Council for Business Education, Switzerland (NDU, 2000).

Basic Principles

The basic principles of NDU are as follows:

1. NDU is an independent Lebanese university, abiding by the Lebanese government rules and regulations regarding the establishment and organization of higher education institutions.

2. NDU is a private higher education institution owned by the Mariamite Maronite Religious Order. The Order is responsible for the university both on the academic and the financial level, and before all parties concerned.

3. NDU is a non-profit private institution. It provides higher education in different fields and uses research, analysis and academic studies in order to reinforce human values in the minds of its students and Society.

4. NDU aims at providing higher education to all students, whether Lebanese or not, without any discrimination by race, color, religion or sect. The university is open to all human civilizations, preserving however the Catholic spirit which is the belief of the Maronite Mariamite Order.

5. NDU works on creating and reinforcing cultural and academic relationships with universities and other higher education institutions both inside and outside Lebanon. All contacts will always abide by the governing laws and regulations.

6. NDU adopts the American system in its teachings and considers the English language as the major teaching language. All majors regardless of specialty must take an Arabic

language course, as Arabic is our native language. It is possible whenever needed, that some courses are taught in languages other than English (Mattar, 1999-2000).

The mission of the university can be best stated as follows: "Notre Dame University-Louaize (NDU) is a Lebanese non-profit Catholic institution of higher education, which adopts the American system of education. The mission of the University is one of promoting universally accepted humanistic, ethical and spiritual values, of enhancing intellectual inquiry and intensifying awareness of human integrity and solidarity" (NDU, 2000).

The University's Objectives

In determining its objectives, NDU takes into consideration the following principles:

- Educate people mentally, physically and spiritually without discrimination by race, sex, religion or color.

- Establish and strengthen patriotism on the basis of freedom, justice and equality.

- The knowledge of God based on free and responsible choice.

- Consider education a mass responsibility, in harmony with other educational institutions in Lebanon and the world, inspiring Society and reflecting on it.

Based on the previous principles, the objectives of NDU are determined as follows:

1. Building a good citizenship spirit among the students. Students should love their country and its people; they should be loyal to their country before anything and abide by its laws, but most of all, they should work hard in order to contribute to its progress and development.

2. Our aim is making students:

   - Educated.

- Fluent in many languages.

- Able to think well and deep.

- Always seeking to increase their knowledge.

- Consider their majors as part of their intellectual personality.

3. Building persons with morality, and who believe in human values, both in words and in deeds.

4. Building a person who believes in God; a person who is inspired by God in his/her search for Good, Beauty and fairness; a person whose behavior is led by God, both on the personal and social levels, with the love of his/her fellow human beings.

5. Building a free person, master of his/her decisions, open to others and believing in dialogue, forgiveness and justice.

6. Building a productive person who reconciles between education and work, and helps in the development of Society and the economic welfare of his/her country (Mattar, 1999, 2000).

The Administrative functions of NDU

The Library

The university aims at making the library an important research center. Any higher education institution is incomplete without a properly held library. Therefore, NDU is doing its best at providing the best resources that would make a complete library. Resources include audio/video material, software packages and microfiche equipment on film for specialized journals. Academic journals are displayed in an easy access.

The library is open to all students, whether from NDU or not; also, it is open to all faculty whether form NDU or not (NDU, 2000).

The library has witnessed some major changes in the last year. What are these changes, and what are the challenges that the new library is facing?

First of all the library has moved from the old campus to the new one, only this year. It has taken a while but the new building was not ready sooner. The first thing to notice is the availability of more room for the library: in the old campus there was only one floor and now there is a whole building. This has resulted in the increase of the library staff; there are now approximately 20 people working there. Along with the increase of space available, there is now the opportunity to unpack all materials that were previously kept away for lack of space. There were many items that the library staff were unaware of. They had received many books as gifts but were unable to unpack or catalog them. With the new settings, cataloguing has become possible. Therefore, deficiencies can now be determined and resolved in order to cater to the students' needs and demands.

Also, an on-line system is under development. This has taken a while for implementation due to some problems they encountered. The old data was exported from the old system erroneously the first time so it had to be done again. Moreover, the old system had some deficiencies like missing information for many articles, wrongly spelled titles or names, etc. The library officials hope to finish this new on-line system by next fall. In the meantime, students and faculty will have to depend on the existing card system, which is outdated by two years. And that is a current problem at the library; students often come and complain that there are not any new references they can look at. There have been many instances where students could not find what they were looking for. Most of the time, the sources were available but were not catalogued. This issue has been resolved by the appointment of a specialized staff at the circulation desk, responsible for helping students in their searches. This person has access to references not available on the old card system so she can direct students. Moreover, there have been cases where students inquired about

certain topics that do not exist in specific books; the person in charge was able to look out some resources where the subject was mentioned. However, as Mrs. Hajj (the university Librarian) has pointed out, students have to be curious and willing enough to come and ask for help and not everyone does that.

There is also a project for acquiring newspapers on CDs. CDs are far more practical for research, and they take less space then the printed issues. Moreover, the printed issues are made of bad quality paper that deteriorates quickly, and it produces material that is damaging for books (acids).

In that context, work is in the progress for the installation of a computer room at the library for consulting the database of all the available references. Moreover, the index will be available through the Internet. For the time being it is available only through the PCs located on the university's grounds, mainly for faculty and staff. Internet access will also be available for students who come to the library for research. This whole project is still in progress.

The library management is also working on establishing "book loan protocols" with other universities so that NDU students be able to retrieve books from their libraries. There is already an agreement with AUB; the NDU library has an access card for the AUB; this card allows the retrieval of a maximum of 10 books at a time from the AUB library, and for those students who request it. The card is lent to NDU students by the library if they prove their need for such books from AUB. NDU pays a fee for that service.

On the other hand, NDU students are allowed to enter LAU and BALAMAND libraries and consult books on site; they are not allowed to retrieve any. The library is working on agreements with those entities.

A security system at the library will soon be in place. Books will be tagged and there will be a detecting device at the library door, in order to avoid any theft.

When asked about students' requests and needs, Mrs. Hajj said that they always take

them into consideration. When there is a demand for an unavailable reference, the library

tries to immediately cover for it in the best way possible.

The books to be ordered are usually requested by faculty. They inform the library

about their needs and the library provides them. Some faculty members order books more

than others; there will be a policy determining the maximum budget for each faculty

regarding book orders. There will also be a reserved budget for the library to spend on book

orders, for each faculty. That means that the library will order books for certain faculties,

without being asked to by faculty members. Such cases include for example the fact that

courses could be available in the university's curriculum without having the proper references

in the library for them. These orders also include students' demands.

In that area, the library may be more efficient in ordering books. They will depend on

critical reviews of books and see what are the best ones to order. Faculty members work with

publishers' catalogues, which could be subjective and mislead the potential buyers about the

qualities of the books available. After all publishers want to sell their products.

On the administrative level, there is a project for establishing personnel related

policies, regarding leaves, sick leaves, working hours, breaks, etc. The library manager is

still drafting those policies and once done she will submit them to the administration for

approval and perhaps a wider application to the whole administrative staff of the university.

Finally, to better serve the students, the library has extended its opening hours. It is

now open from 8 a.m. till 9 p.m. (Hajj, 2000).

The Students Affairs Office

The Student Affairs Office (SAO) provides students with many services and

activities, for them to develop their full potential both academically and otherwise. In this

way, students will be able to make the best out of their university experience.

The services provided by the SAO are as follows:

Student Housing

Until the university has built up residence halls for students, the SAO handles these issues by providing accommodations for students in nearby facilities (NDU, 2000).

Counseling Services

Students are free to come to the SAO and discuss any problem that they have. The staff is always there to help them. There are counselors and a psychiatrist who are there for these matters. And as Mr. Abou Jaoude (director of the SAO) said: "students know they will always find an open door at the SAO. They can discuss the minor problems as well as the major ones. And we try our best to help them in their problems, especially with the administration. We are always with students opposite the administration, of course in reasonable and solvable matters" (Abou Jaoude, 2000).

Health Services

NDU students are fully covered every hour of the day by an insurance policy. There is a free health service on campus with the presence of a nurse and a physician. Emergencies are dealt with on location and serious cases are transferred to hospitals (NDU, 2000).

Disability Services

Students with physical, visual, auditive, speech, learning or other disabilities are helped in the best way for them to become part of the learning process at the university. They are provided the proper assistance and their needs are met with the proper accommodations. The university has to know before enrollment about the case, so as to properly prepare for it.

Athletic Services

Athletics at NDU are highly encouraged and facilitated. They are considered a complement

to the academic life. The sports available for practice at NDU include the following:

Basketball, Volleyball, American Football, Judo, Teakwando, Physical Fitness, bodybuilding,

Tennis, Swimming, Soccer, Handball, Table Tennis, etc.

Both faculty and students practice them (NDU, 2000).

Clubs and Societies

The SAO supervises and coordinates the activities of many clubs. These clubs aim at

providing recreational activities alongside the curricular ones. The available clubs at NDU

for the moment are: International Relations Club, Advertising Club, Debate Club, Computer

Club, Marketing Club, Green Campus Club, Music Club, Chess Club, Architecture Club,

Engineering Club, Social Club, Banking and Finance Society, Radio-TV Club, Hospitality &

Tourism Club, Camping Club, Translation & Interpretership Club, Public Relations Club and

Astronomy Club (NDU, 2000).

Student Cabinet

The student cabinet is composed of representatives elected by the students. Those

representatives are responsible for following students' rights, and for assisting in the extra

curricular activities (NDU, 2000).

The election of the student cabinet is one of the major events handled by the SAO. The other

event is the election of Miss NDU, which is organized by the student cabinet itself, of course

under the supervision of the SAO. Other events are organized under the supervision of the

SAO; they include conferences, parties, special events, etc. Political events are usually not

allowed on campus, except with the approval of the director of public relations, who confers

directly with the university's president (Abou Jaoude, 2000).

The SAO handles so many issues, mainly concerning students' issues. So it is a constant turmoil at that part of the university. The major problem that was mentioned by Mr. Abou Jaoude was the lack of personnel in the department. There are too many events to organize and too many issues to handle that it is imperative that there are more people to help. However, the administration is reluctant in satisfying this request. "So far, the SAO has handled everything so well, without any major problem to be noted, so apparently the administration does not see any need for additional staff" (Abou Jaoude, 2000).

The Financial Aid Office

NDU's mission is to provide education to all students without differentiation. In that context, it has established the Financial Aid Office to help those students with limited financial resources. There are many financial aid programs available; they are listed below.

Scholarship

Students with a high Grade Point Average (GPA) are entitled to scholarships, as a reward for their academic excellence. They have to be full-time students and have completed at least 12 credits at NDU. The scholarship may range from 25% to 75% off the tuition (NDU, 2000)

Work-Study Grant

Students with financial need are able to cover up to 40% of their tuition fees. They can do this by applying to the work-study grant. If accepted, they will be assigned to work as assistants in various departments and offices of the university. The working schedule should not affect the class schedule of each student.

Only eligible students can benefit from this grant. They have to show their need for it, they must have completed at least 12 credits at NDU with a certain minimum GPA, and they must be full time students i.e. with a minimum of 12 registered credits per regular semester. Moreover, the grant may be cancelled if the student fails to abide by the conditions set by the financial aid office.

This is a way of letting students develop their working skills, gain more responsibility and be better prepared to the working environment after graduation (NDU, 2000).

Student Employment

Sometimes students show special skills, and they are requested by the deans of faculties for employment. This is an option given to those students who are not under the work-study grants. The student employment covers only for one semester; working hours and the working rate are to the discretion of the financial aid committee (NDU, 2000).

Grants for excellence

These grants are given to students who show achievements in sports, artistic, cultural or social activities. The grants for excellence can reach from 10 to 15% of the tuition; the financial aid committee under the supervision of the director of student affairs rules on the case (NDU, 2000).

Sibling Grant

This grant consists of a 25% reduction from the tuition. It is given when there are 2 or more brothers and/or sisters registered at NDU. Students must be full-time undergraduates with a minimum credit load per semester and a minimum GPA. If one of the siblings does not fulfill the conditions, the one or ones fulfilling them are eligible for the grant (NDU, 2000).

Graduate Teaching Assistantship

Graduates can save up to 40% of their tuition fees. They can become assistants to some teachers. This way, they assume instructional responsibilities in undergraduate classes. Their duties include an introduction to the course, monitoring of exams and the preparation of instruction materials under the supervision of the instructor (NDU, 2000).

Graduate Research Assistantship

Graduates can also benefit from this facility if they show superior academic performance and if they are willing to go into academic research. The reduction in tuition can go up to 40%. Another 40% of the tuition can be covered if the student wishes to teach, of course after the recommendation of the faculty dean (NDU, 2000).

To be eligible for the two graduate assistantship programs, the student must be a full timer and must have completed at least 9 credits in the NDU graduate program. In addition the cumulative GPA must be a minimum of 3.7 (NDU, 2000).

The Office of Public Relations

The public relations office is an essential complement to the academic and administrative operations. It promotes the NDU programs and various activities. All public conferences at the university are supervised by this office, which also serves as a mediator between the university and the media. It is also responsible for the management and the publication of the university's magazine, the "NDU spirit" (NDU, 2000).

The Placement Office

This office can be of a great help to NDU students. It provides various services that help them in their job search. First of all employees there provide counseling regarding career paths and goals, they help students find jobs, write CVs and get in contact with potential employers (NDU, 2000).

The Computer Center

The Computer Center at NDU is a support for the academic and the administrative functions. First of all it supervises and controls all administrative applications (the library, the business office, the registrar, etc.) and it provides the complement for many courses in computer science, engineering, applied mathematics, business administration, computer assisted design and the graphic and animation arts. All these majors cannot be successfully taught without their relevant computer applications.

Also, the center is responsible for the management of the hardware, software and the information assets of the university both on main campus and in the North Lebanon Campus (NLC) (NDU, 2000).

The center is equipped with different types of servers, some used by the Library (Oracle DBS), the registrar and the business office (Informix) and others used by the students in application to their different courses.

On the other hand, there are around 400 personal computers (PCs) spread in the university, some with the faculty and the others in the center's premises. There are also some Macintosh machines, especially used by the arts students for their projects. The arts students benefit from many facilities other than the powerful machines with the needed software; the center also provides them with color laser printers, scanners and plotters. All machines on campus are linked together into one network.

The computer center includes different specialized labs. There is the GIS lab, the Oracle lab, the Graphic and Interior design lab, the Architecture and Engineering lab, the Science lab, the Math lab, the Business lab (with applications for accounting, hotel management and tourism, etc.) and the internet lab. There are also, 3 closed rooms that are used for classes; one is used for typing classes, another for engineering and architecture classes and there is one for the arts classes.

The Internet lab includes 7 PCs for the use of the students. This seems a relatively small number considering the total number of NDU students, which reach approximately 3200 students. However, the computer center director, Mr. Maroun Atallah does not think there is a problem with the number of available PCs for Internet use. In his opinion, the problem comes from the timing of the students coming to the center to work on the Internet. "Most students come between 10am and 1pm, so it is common that they will find all machines booked. They get discouraged easily and do not come back later, or don't book a place for them at another time. They want to find available PCs at the time of their convenience, which is unreasonable of them. The center is open till 9 o'clock in the evening, and I am sure in the afternoon, all PCs are available, but there is no one to benefit from that. However, we are planning to add more PCs for Internet use very soon, but I think we will still have the same problem with students' complaints. It does not matter how many machines we have, I think there will still be peak hours and other moments of the day where most machines will be available" (Atallah, 2000).

According to Mr. Atallah, there are no major problems to be mentioned at the center; the regular ones are those in connection with student discipline. Sometimes there are hardware failures, like a printer not working well, etc. These matters are inevitable. Regarding the orders of machines and other software, the director has the authority to do that. He submits the requests to the administration and so far there hasn't been any problem

whatsoever. All requests have been reasonable, and management trusts the good judgement

of the computer center director (Atallah, 2000).

The computer center director claims that they do take students requests into

consideration, as long as they will benefit to a large number of students. They cannot act

upon individual requests; that would be unreasonable. However, there hasn't been any major

request that showed a lack in the center. Practically, all of what students need is found in the

center. Students are welcome to use the premises for all their work concerning their classes.

For example, term papers, projects, etc. can be printed at the center. The students can have

access to all equipment they need, even if they are not registered in a course that requires

access to the center (Atallah, 2000).

However, this last point is challenged by opinions collected around campus, stating

that there are limits to what students can do at the computer center. This issue will be

addressed later in the study.

The Registrar's office

The registrar's office handles different lines of activities: the registration process, processing

students' applications, and other student-related issues. The admissions office handles the

applications and the entrance exams basically. However, the main activity of the registrar's

office is the registration process. This process combines a lot of activities, from the

preparation of the course offerings, to the registration itself (i.e. the data entry), to the

preparation of the attendance and class lists, and so on. The process is complex, and it is the

subject of many criticisms especially from the students who think that it is not an efficient

process. For students, the process is summarized as follows. First the student has to put a

down payment at the business office in order to be able to register (they deliver the schedule

sheet at the business office, upon payment). Then the student must pass by the advisor's

office to choose the list of courses to take. After that, the list of courses has to be processed into the computer system at the registrar's office. However, if there is a problem with a certain course (for example, a course is full, etc.) the student has to repeat the second and third steps, i.e. go to the advisor and then to the registrar. The repetition may be for more than once, depending on the availability of the chosen courses. What would be ideal is to let the advisors have direct access to the registration program so that registration is finalized in his/her office, and thus eliminating the last step.

The Visual Arts Studios

A special space is dedicated to interior and graphic design students. It consists of various studios properly furnished and equipped in order to meet the needs of all those students. Aside from these studios, students can access special computer labs for their various projects, and to complete their education. A class equipped with projectors is also available for arts students, especially for lectures on Art History (NDU, 2000).

The Photography Laboratory

This facility is provided for visual arts and mass communication students mainly, as a complement to the photography classes given at the university. The lab is designed to allow students to develop and print their pictures, as well as to learn about the latest techniques in the photography field. The lab is under the supervision of qualified staff (NDU, 2000).

The Radio-Television Studio

This studio is designed to provide students with the opportunity to apply their theoretical knowledge. This way, they have the opportunity to use all equipment needed to become qualified in the field they are majoring. The available equipment includes mixing

and editing machines, various video recorders, amplifiers, and equalizers, lighting devices, professional cameras and shooting equipment both indoor and outdoor. Moreover, a sort of mini radio station was installed to give students a more realistic application to their classes.

The studio also serves to record all the University's activities such as lectures, seminars, etc. and they are kept in the studio's archives (NDU, 2000).

The Projection Room

This room will be at the disposal of mass communication students mainly. It includes the latest equipment in audio and visual technology. It will also serve for the NDU "Ciné Club" in the future (NDU, 2000).

The Theater

The NDU Theater is still in the construction phase. All necessary equipment and materials will be available for its good functioning (NDU, 2000).

The English Learning Resource Center (ELRC)

This center has a major objective of providing the complement to English courses. Its sessions are meant to improve students' vocabulary, grammar and listening skills.
Students are free to work on their own or under the supervision of the center's qualified staff. There is also a reading room where periodicals, novels and other articles are available for student use. In addition there is a fully equipped room for translation and interpretership students (NDU, 2000).

The Science Laboratories

Laboratories are available for physics, chemistry and biology classes. All the necessary equipment is available (NDU, 2000).

The Engineering Laboratories

Various specialized engineering labs are available for students. The practical part is a very important aspect for a complete education (NDU, 2000).

The Academic functions of NDU

Notre Dame University is divided into 4 different schools or faculties.

The faculty of Business Administration and Economics

This faculty is divided into two departments, the department of Business Administration and the department of Hotel Management and Tourism. The first department offers Bachelor degrees in Accounting, Banking and Finance, Economics, International Business Management, Marketing, and the MBA program. The second department offers a Bachelor degree in Hotel Management and Tourism.

The faculty of Engineering and Architecture

This faculty offers Bachelor degrees in Architecture, Civil Engineering, Computer Engineering, Electrical Engineering and Mechanical Engineering.

The faculty of Humanities

This faculty is divided into 6 departments. They are the Department of Arabic Language and Literature, the Department of Education, the Department of English, the Department of Mass Communication, the Department of Visual Arts and the Department of Social and Behavioral Sciences.

The degrees offered are numerous:

- Bachelor and Master degrees in Arabic Language and Literature.

- Bachelor degree in English.

- Bachelor degree in Translation and Interpretership.

- Master degree in English Literature.

- Master degree in Applied Linguistics and TEFL.

- Bachelor degrees in Communication Arts, Journalism concentration and Radio/TV concentration.

- Bachelor degree in Theater Arts, Advertising and Marketing, Graphic Design, Interior Design and Physical Education and Sport.

- Bachelor degree in Education: Early Childhood, Learning Disabilities, Education of the Gifted, School Counseling and Education of the Handicapped.

- Bachelor and Master degree in International Affairs and Diplomacy.

- Teaching Diploma.

The faculty of Natural and Applied Sciences

This faculty is divided into 3 departments: the department of Computer Science, the Department of Mathematics and Statistics and the Department of Sciences.

The degrees that the faculty offers are bachelor degrees in Computer Science, Computer

Information Systems, Business Computing, Actuarial Science and Insurance, Mathematics,

Biology, Medical Laboratory Technology and Environmental Science.

In addition it offers one Master degree in Computer Science (NDU, 2000).

The North Lebanon Campus (NLC):

NDU has opened a new campus Northern Lebanon, as an affiliate of the main

campus. The NLC offers different majors, however not as varied as the main campus

programs. Our interest here is in the various functions of the NLC and the relationship with

the main campus, and their effects on students.

The NLC is a unit largely dependent on main campus in many activities. In the

registrar's office operations, activities like the course offering, the registration, the attendance

lists, the final class lists, the drop and add and the issuance of enrollment certificates are done

at NLC, however they are not official or final unless they pass by the main campus. For

example let us suppose a student registered in a certain course. At the closing of the

registration period, the records are transferred to the main campus for finalization.

Other activities like the cross registration, the issuance of transcripts, the processing

of grades and their issuance, and the clearance activities are all done in the main campus. In

some cases, the students' personal presence is mandatory, so they have to drive all the way to

the main campus for the formalities. If everything goes smoothly, the student wouldn't have

to come at several occasions.

On another hand, activities related to the Students Affairs Office (SAO) are not

available at NLC. For example the issuance of student IDs is done only in the main campus.

This activity requires the personal presence of the student, and IDs are a must to all students.

The same applies for the financial aid applications and approvals.

Clearly, most important decisions and procedures are done at the main campus. The NLC is only a "representative office".

Why do we need to think of Total Quality Management at NDU?

Introducing Total Quality Management principles and activities into an organization does not necessarily mean there is something wrong, or that the situation is critical. Total Quality Management aims at improving current processes in order to deliver better services for customers and to create a better environment for employees. And as we have seen, many processes need to be improved at NDU. Already some departments like the library are aware of the need for change, and they are working in that direction. Changes could also be made in the computer center, the registrar, the academic organization and programs, etc. The following chapters will provide a framework of steps to be taken in order to reach our aim of quality.

CHAPTER FOUR

THE RESEARCH CARRIED FORWARD

This chapter consists of describing the research carried forward in the course of the project. Our aim is to provide suggestions on the way to introduce quality concepts into the university's administration and other support services, as well as into the academic aspect. The research carried out is of an exploratory nature; it will give a rough description of the situation at hand, so that we will be able to draw some conclusions. It will not probably be appropriate to decide on drastic measures as a result, however, a certain direction may be determined on the course of action to be taken.

The field research is divided into 4 parts. The first part consists of a series of interviews conducted with prominent business entities operating in Lebanon. The interviews were done with people in the human resources department, responsible for the recruitment of employees in general, and fresh graduates in particular. The second and third parts are surveys conducted with the administrative staff and the faculty of NDU, respectively. The fourth part is also a survey, but this time conducted with the students of NDU.

Interviews with business entities

This is a series of personal interviews with people in the human resources of some important business entities.

Questions were mainly about the qualities, the characteristics and the main requirements they expect their future employees to have. Other questions were about possible contacts with universities, and, if they have any, to what extent they collaborate with

universities in general and NDU in particular. The outcomes of these interviews are detailed as follows.

Interview with Gisele Hayeck, recruitment and training officer at Byblos bank; June 15, 2000:

What they look for in a candidate is first his/her degree. Of course it has to be related to banking in general if it is a position in the banking operations. Other degree holders are recruited upon need; for example at the moment, they are recruiting communications engineers for the installation of their new system. Next to the degree, they look at the grades. In their opinion, good grades are a good indicator in general. Students who get good grades usually are hard workers and achievers, so who wouldn't want them?

Next, the candidate is tested in his personality traits; his/her ability to deal with people, the way he/she reacts to certain situations, the communication skills, the manners, etc. At Byblos bank, the candidate is tightly tested and screened through a series of interviews.

A candidate with previous working experience is more appreciated. For example recruits who have undergone internships have a certain advantage, according to Ms Hayeck. Internship gives them personality, responsibility and maturity. Plus they would be better prepared to face the working world.

Byblos Bank has many NDU graduates among its staff. So far, their performance has been very good. According to Ms Hayeck, it is because they have simply hired the best of NDU in that field, so it was a good choice of them.

And when asked about what makes a good candidate? She answers that university alone is not enough; it is in the candidate's personality as well, and personality plays a major part in that. However, we should not ignore the university's impact.

Regarding her opinion of new graduates these days, she finds that graduates' levels have lowered considerably lately. In her opinion, today's graduates don't show much

responsibility and maturity. She has seen that in the job fairs she has attended. Students come in to the stand and inquire in a careless way about what the bank has to offer them; they don't know how to market themselves. They should be more eager to work; and they should show it. That attitude will not get them jobs easily.

The participation of Byblos Bank in university life is limited to the job fairs. Recruiters go to these job fairs in an attempt to meet future potential candidates. Also, Byblos Bank participates in school orientations. Awareness among high school students is important in the way it determines the major they will choose when they go to college. "Some students think that by majoring in business, they would immediately become bank managers", says Ms Hayeck.

Interview with Dr. Nabil Abboud, Human Resources manager at Audi Bank; June 8, 2000:

In Audi Bank, they don't emphasize much on the technical qualifications. Of course they are important, but not so important, since they rely on their in-house training. The level of education is important. It determines the candidate's ability to understand and to analyze things.

For some positions, certain profiles are needed. For example for employees in the financial market segment, or investment banking, the degree is important in the related field, and sometimes experience is required.

In Audi Bank, they have continuous quality training and awareness. These are very important concepts for them, so they are doing their best in order to insure quality services to their customers.

So mainly, the technical skills needed at any job in Audi Bank is earned from the inside, after the employee undergoes training and is shifted to all the departments of the bank.

Of course, there are specific jobs where the technical skills are a prerequisite, for example if they need an electrical engineer or a computer engineer, etc.

In conclusion, they rely on the university for issues like the personal skills, the personality, the way of thinking, the level of thinking and most importantly the ability of understanding and of analysis. They believe that all technical skills needed at Audi Bank are acquired in-house, through training and development.

Interview with Mr. Nabil Iskandar, former Human Resources manager at Fattal group; May 16, 2000

The qualities they look at when hiring new employees are as follows:

- The degree: they look for a degree in the relevant field of their operations, and the position applied to.

- General Knowledge: the candidate should have a minimum amount of general knowledge, after spending years in school then in university.

- The personality: some personality traits are very important. For example if a candidate is applying for a sales job, the communication skills and the good presence are the key characteristics. The candidate must show evidence that he/she is a hard worker and a self-motivated person.

- The candidates must also show that they like the job they are applying to. If the person does not like his/her job enough, he/she will not be very good at it.

The skills that are most important are the personal skills, the way students think, and their language skills. Those are mainly acquired in school. Schools do most of the work, since when the student reaches university, he/she will already have a certain personality; the university helps in its evolution but not in the shaping like the school does.

According to Mr. Iskandar, universities are outdated and inappropriate in the material they teach, whereas it should be the opposite. Most of the teachers are not professionals; they know a lot about the theoretical aspect of the issue without practical experience. In his opinion, teachers should do internships from time to time, to have a better understanding of the whole topic, not just the theoretical aspect.

Professionals who have real experience in business should be the ones teaching courses. The university must get outsiders among its faculty, in order to change the pre-established culture. For example, here in Lebanon, all universities use Kotler as a reference in marketing. Kotler is very good and his principles are applicable in all countries. However, what we need here are principles applicable to our own country and our own unique market. We cannot just apply general rules here; we need more focus.

The university programs must dedicate a greater part to internships. They are essential for students when graduating. First of all, they would be well prepared to what awaits them once they leave the university; second, working would shape their personality and teach them about responsibility and accountability. Moreover, the existing programs lack the proper technical courses. For example, why aren't there any sales courses? Marketing graduates often, if not most of the time work in sales. Universities should offer more specialized degrees, not just degrees in Business Administration. Students often expect too much when they go into the working environment. They think they will have a manager's position, whereas they have to start from the bottom. The problem at Fattal is that young recruits do not want to work in the sales division at first. "Most marketing majors want "marketing" jobs, and they don't know much about marketing. Graduates expect much more than they are likely to get."

When asked about NDU, Mr. Iskandar talked about the internship requirements of senior students; they involve a lot of unnecessary paperwork.

On the other hand, there are no real contacts between NDU and Fattal Group for purpose of academic development of students. Mr. Iskandar believes there should be; "universities should survey businesses regarding their needs and what they look for in university graduates, and cater to those needs".

While in the States, Mr. Iskandar witnessed the implementation of Total Quality Management in the University of Washington. What they did is that they brought a manager from a bank to head the Total Quality Management efforts in the finance department. This made sense, according to him. The business sector is more ahead of any other sector in terms of quality awareness and adoption. So bringing people previously involved in quality efforts in the business sector adds a new and fresh view to the university culture. This new person will be more likely to succeed since he/she has a totally different view of the situation at the university, plus he/she had already been exposed to quality issues, and has accepted them. New blood and a change in culture are exactly what most universities need.

Interview with Mary Abdel Massih, Human Resources officer at Century Park Hotel; May 17, 2000

What they require of new recruits at the Century Park Hotel depends on the position applied to. Here are a few examples.

For administrative staff, the candidate mainly must be systematic, sharp and focused on details.

For the front desk staff, the candidate must be open, presentable, and well mannered; he/she must also have good command of foreign languages, and excellent communication skills. These skills, in addition to being a talkative person are also a must for all candidates to sales jobs.

For the kitchen personnel, experience is very important. By experience they mean, training; a fresh graduate may not have had time to properly work anywhere, however, during his/her studies, he/she must have undergone training courses.

In some of these areas, a degree in Hotel Management and Tourism (HMT) is a must (i.e. Kitchen, front desk); the other administrative position do not require an HMT degree.

There are NDU graduates among the staff at the Century Park Hotel. However, when asked to evaluate their performance, Mrs. Abdel Massih said that she believes it is not just the university that determines the good employee. Rather, the major determinants in her opinion are the personal traits, which are not determined by the university degree.

On another hand, there should be a close collaboration between universities and businesses, in order to better prepare the students to face the challenges of the working environment. Such collaboration exists between the hotel and NDU. First of all the hotel provides the internships required by the university from HMT students. Also, the Department of Hotel Management at NDU has made some improvements in the academic program offered, based on suggestions made by the management of the Century Park Hotel (personnel department). One example includes the increase of internship hours. At the beginning they were minimal, but they are increasing step by step. The problem the hotel industry has with universities is that they do not allow sufficient training for their students. Most programs are divided as 90% theory and 10% practice, whereas the ideal would be a 50-50 arrangement. Training should be given in all areas of operations of the hotel, even the "dirty" jobs; students need to earn their degree well, and to understand all the processes involved in the operations of a hotel (for HMT majors).

NDU is improving the training ratio as compared to the total requirements of the HMT major. In that way, we can say that the Century Park Hotel is participating in the design of a major at NDU.

Mrs. Abdel Massih mentioned some problems that the hotels industry in Lebanon is facing. The market lacks properly trained personnel. As mentioned earlier, training should be more emphasized. Graduates from technical schools are properly trained; however, they have a serious language problem. Their language skills are practically non-existent. Universities can benefit from this situation by increasing training hours, thus allowing their graduates to seize the opportunities.

On the other hand, graduates do not accept to start at level zero; they want supervisory levels directly, which is unreasonable. For example, a restaurant manager cannot reach this position without knowing well every single detail of every activity involved in the operations of his/her restaurant. Here, the Lebanese mentality is predominant. However, there is a trend towards the opposite, mainly due to the difficulty of finding jobs on the market.

Interview with Roger Nasr, Senior Manager Deloitte & Touche Lebanon
April 14, 2000

When hiring new employees at Deloitte & Touche, they mainly try to see whether the candidate is intelligent, perceptive, sharp, etc. They also assess his/her likeliness of the profession, or the field in general, and the reason for choosing the audit firm. They also look at the grades. Grades are important, but a student who was excellent in university may not necessarily make a good employee. The grades are important in the business courses (accounting in particular), in computer courses, statistics mainly, and the rest is of less interest.

Languages are very important as well. The candidate is asked to speak in the languages he/she knows. The fluency is noted, as well as the manner of speech, the body language, the expressions, etc.

Previous to the interview, the candidate sits for an exam, mainly to test his/her accounting knowledge. Then during the interview, specific questions are also asked in accounting and finance.

In brief, Mr. Nasr thinks that candidates don't need to have a special knowledge in a specific field to enter the firm. However, a sound knowledge of accounting and finance is required; the auditing skills are acquired later, through practice and experience.

There are no contacts between NDU and Deloitte & Touche; however, with AUB it is different. Mr. Nasr taught at AUB the audit course. He thinks that a professional in practice should teach such a course. The same applies to most business courses. Students need to have real examples, with companies operating in Lebanon, not just the theoretical issues in books mainly written about the American society.

Students should do more internship. A graduate with practical experience has more chances at finding a better job than a graduate with no experience. Plus, universities should make more alliances with big business firms to allow students to go through proper training programs before they graduate. Moreover, those alliances would help universities tailor their academic programs in a way to meet market demands.

Conclusion:

To conclude, the major issues mentioned by the interviewees were all in the same context. The main idea was that graduates should undergo more internship in order to face better the real working world upon graduation. Personality counts for a great deal in all businesses, the language and communication skills as well.

On the universities' part, there should be a closer collaboration with businesses in order to meet their demands. Plus, universities should be more open to practicing

professionals for their help in giving courses. A professional's view is different from an academic's view, and it will bring a complementary and useful insight.

Finally, universities should prepare better their students to face the working world. Students should know what is awaiting them, not expect the moon once they are "out". They may get a very disappointing fall to earth in that case.

Survey of the faculty staff at NDU:

The academic staff is considered to be the core of any higher education institution. Therefore, any attempt to improve the quality of the institution cannot succeed without the involvement of the faculty members.

In that context, a questionnaire was designed to gather information about what possible areas could be improved in order to have faculty members feel at ease and give their best to the students. The questionnaire not only covers the settings and facilities provided by the university, but also the relationship with students, and how the instructors perceive them. A copy of the questionnaire is filed in Appendix A.

The questionnaire was circularized mostly with the full time faculty members due to their availability. Part-timers are not as available and it was difficult to track them.

The results of the survey are displayed in Appendix B1.

However, these results are not reliable for the following reasons. The response rate was very low among the faculty members. An important segment of them refused to fill in the questionnaire, despite assurances of anonymity. Therefore, the results are not conclusive enough to lead to a good assessment of the situation.

In fact, the lack of response from the faculty members has some meaningful explanations.

This shows that there is a feeling of fear or carelessness. Instructors are not willing to give their opinion either because of the fear of losing their position, or because they don't

care about changing the status quo. They might see that things are ok as they are, why be the one to initiate change and go through all the trouble, let someone else do that. This could be due to the lack of motivation among the faculty staff. Mr. Youssef Zgheib, chairman of the Hotel Management and Tourism Department in the Faculty of Business Administration and Economics, raised this issue as well. He thinks that faculty members lack the proper motivation due to the lack of support they receive from the university's management. The faculty members' lack of motivation could also result from the lack of motivated students, or it could lead to the lack of motivation among students. 74.1% of the faculty members surveyed (although this may not be an indicative result) either agreed or strongly agreed that students are only concerned with grades. And that is true in many cases. The first thing most students look for when they want to choose a class is inquire about the instructor's grading system, whether he is generous in grading or not. They even go to see the grades of his class in the previous semester, and look at the frequency of As, Bs, etc. The lack of interest in the course material and the over-concern with grades can push instructors to loose interest and stop caring whether students really understand the material.

Another point to be raised is the financial rewards at NDU for faculty staff. Although the result cannot be a good indicator, most of the members surveyed thought they were not well paid. Those who thought the contrary were not very convincing while filling in their answers. It was obvious that some of them did not want to express their true opinion.

Survey of the administrative staff at NDU:

The support of the administrative staff plays an important role in a higher education institution. The faculty members cannot work well without the proper administrative functions. This is why we have to consider that aspect in any quality effort.

Another survey with another set of questions was conducted with the administrative staff of NDU. A copy of the questionnaire is filed in Appendix A.

The total number of the administrative staff is approximately 70 employees. The questionnaire was circularized to 60 of them. A response came from 29 only. The results are filed in Appendix B2.

Again, the same problem as with the faculty members occurred. Employees were reluctant to express their opinions. This is another indication of the reigning atmosphere at the university. Either it is that of fear or of apathy towards the already existing situation; as long as they keep a low profile and do not challenge the status quo, everything is fine. A question asking the candidates to identify his/her tasks was not answered. As some interviewees explained, answering this question would have identified the respondent, and they do not want that.

Another interesting remark is the contradiction that was sometimes noted in the resulting answers. For example, when employees were asked to rank the salary, 75.9% of the answers were "not important or not important at all", whereas 67.9% mentioned the "financial reward" as the best way to acknowledge good performance. Moreover, more than half the surveyed staff was not satisfied with their income; this figure is likely to be bigger given the factor of employee bias. Employees would prefer to make a good impression by answering what they think is expected of them. This factor makes it rather difficult to have conclusive results that denote of the real situation.

The results show that employees have a certain understanding of quality issues regarding their operations, however it is not complete. Excellent team relations are very important to them. It was frequently mentioned as very important. "Speed in carrying on operations" was mentioned the most as very important. The good interactions with customers come third followed by the satisfaction of the direct supervisor and the error-free

service. In brief, the good atmosphere from within is more important than the good relationship with the outside, i.e. the customers.

However, if we look at the question that follows about the priority of problem solving, we notice rather contradictory results. The top priority problem is a client who is upset. It is followed by the problem of an upset supervisor; third comes the team who is upset, then the colleague and finally the employee himself/herself. Most likely, employees know that quality principles champion the clients' cause (most of them are university graduates); that is why they tend to mention the problem of satisfying clients first. Whereas satisfying the direct supervisor should not be so significant a problem as to precede the remaining ones, especially those with the team or colleagues. This shows the rigid and hierarchical culture where employees are dominated by their supervisors. This also explains why employees want more decision making power. They do not have the necessary authority to make decisions, as revealed by their answers. They believe more decision-making power improves employee satisfaction and leads to the delivery of quality services. They understand that more decision-making power means more responsibility and more workload, and they are willing to have it.

To get back to the customer satisfaction concept, so far we have noted that employees give top priority to satisfying their customers, in our case the students. However, more than half of the persons surveyed believe students should understand the problems they face, and should not expect quick responses. Moreover, the employees think that students should not complain about the existing procedures. These last results are totally against the concept of customer satisfaction. They show that employees are not concerned about meeting students' demands as much as they are concerned with their own well being.

What is ironic is the fact that most of the employees interviewed believe that quality is inherently present in the services they provide, that they receive training in quality issues, and that management is concerned in surveying students.

Most probably they are saying what they think they should say so that management looks good. Otherwise, if training is really given regarding customer services, then it is not accomplishing its objectives. Moreover, students' opinions are only sought for regarding the academic aspect; towards the end of the semester they are asked to fill in questionnaires to evaluate their instructors' performance. Other than that, no consideration is given to students' opinions.

The real problem like in most organizations has its roots in the institutional culture that is predominant in the university. Total Quality Management cannot survive in an organization that does not have a quality culture. NDU being a young university is likely to establish a quality culture, as many of the practices are still not hard-set.

Survey of the students at NDU

The main concern of this study is finding ways to improve the university's various services so students get more quality education. Therefore, it is essential to collect their opinion on various issues affecting their life at NDU.

The questionnaire is filed in Appendix A. The results of the survey are filed in Appendix B3.

The questionnaire was circularized to 250 students and only 216 were validly retained. The results will be analyzed mainly on three levels. First the Physical settings and facilities, then the support services and finally the academic part.

Physical settings and facilities:

More than half the students never or rarely go to the library. This is probably one of the very few universities where this happens. It is a fact that all courses require some kind of researches, so it would be logical to go to the library. These results come from the limited library resources so far. As noted in the previous chapter, the library at NDU has recently moved to the new campus and many sources are not easily accessible. That is why students

think that the NDU library is not useful in the course of their studies (52.7% disagreed on the usefulness of the library).

The cafeteria is another area that students complain about. A big majority goes to the cafeteria, however the reasons differ. The main reason for going there is for food with 41.9% of the answers. Other reasons include hanging out with friends, killing time between courses, etc. However, when evaluating the cafeteria's food, only 24.8% of students rated it as good or very good. The majority said it was bad (41.1%). These are contradictory results given that students mainly go to the cafeteria for food. But it could be explained by the fact that students buy snacks and not meals.

All in all, students do not rate the cafeteria well enough. The settings are mainly seen as bad. This could be due to its location. It is built at the far end of the campus. It is true it has a great view, however it is far and maybe it should have been in the center for better and easier access.

The computer center is an essential place for students majoring in computer related fields. However, it is becoming equally important for other majors as well. Many business courses nowadays require the use of special software, so practice is inevitable. Another growing need for the center is the use of Internet. Most students now do their researches on the Internet, which is a faster and easier than going to the library sometimes.

More than half the students surveyed use the computer center. Also, around half of them think that the computer center is not easily accessible any time or day. The main problem mentioned was the lack of space or available machines to work on (61.4%). The availability problem is mostly felt in the Internet lab. There are only 7 machines available for Internet use, whereas there are around 3,000 students at NDU!

It is only logical that problems will arise.

One of the major sources of complaints at NDU is the parking. A majority of students (61%) thinks it is not sufficient given the total number of students at NDU. This may be a good point, since often the cars are almost parking on the highway and have to walk a good distance to reach the campus. 89.2% of students surveyed agreed that there is a problem in the parking system. The long distance from campus was the most mentioned issue. Other problems mentioned were the lack of good organization, the lack of space for all students, etc. On the proposal of having a building reserved for parking, 77% said it would solve the problems. However, students are adamant on not paying for parking, even if the building project was undergone.

Although parking problems are common to all universities in Lebanon, it is worth noting that NDU does not collect parking fees from its students. Nevertheless, the parking could have been organized in a way to surround the campus so those students would not have to walk long distances to reach their classes.

More than half the students believe that sport activities are not facilitated or encouraged. This is mainly due to the lack of proper playgrounds for sports. However, they are under construction. For now, students can practice some sports outside campus, using their ID. But this facility is not well spread around. Almost 41% of students are not aware of it.

The support services

The support services include issues like the registration, the administrative functions and the advisory services.

The registration process can become a nightmare for students, especially when they have to deal with finding a place in the right needed course. 61.8% of the surveyed students mentioned the inefficiency of the process (22.6%) and the need for major improvements (39.2%). It is for sure that the process needs improvements, especially with the North

Lebanon Campus (NLC) students. They have to come to the main campus at least once every semester to finalize their registration.

On the other hand, although more than half the students agreed that the administrative staff was friendly and welcoming, there are still 46.5% of them who thought the contrary. 41% thought that the staff is not efficient in responding to the various needs and demands of students. These figures should not be overlooked. To have quality services, the level of dissatisfaction must be negligible if not non-existent. Therefore the need to train the administrative staff on quality principles is imperative.

The advisors are seen as helpful and always there for the students (72.2% of favorable opinions). However, the deans do not enjoy such popularity. Almost 50% of students think that the deans are not fair in dealing with their problems and issues.

It is to be remembered however, that students in general do not go to the dean unless they have a problem that he only can decide on. Consequently, it is illogical to assume that all problems or issues related to students have to receive favorable answers.

The academic side

Students were surveyed about the teacher characteristics they find most important, about the effectiveness of the teaching methods and other concerns.

Most of the students agreed that teachers should be judged on their teaching methods rather than on their degrees or grading systems. The degrees do not necessarily make good teachers. The important characteristics of a good instructor are mainly his communication skills and his practical experience. The combination of both the practical and the academic background make a better teacher.

Their evaluation of the teaching methods revealed interesting aspects. First of all most of students agreed that the teaching methods help retain information, however the degree of retention varies. 47.2% evaluated the degree of retention between 51 and 75%, and

38.4% said it was between 26 and 50%. This could be an indicator of the ineffectiveness of the teaching methods employed by the faculty. One may argue that students are never satisfied with their instructors no matter what they do. It could be true, but we cannot ignore these results; if nothing, let us suppose that some of it is true. It is enough to want to bring changes to the system.

On the other hand, when students were asked about what would happen if grades were to be banned, 78.4% said that they would either work less than before or not work at all. This shows the increased concern of students for grades. They only study in order to get grades, and if there aren't any, why study at all? In that case bringing quality into the university would be a big challenge, especially to change the students' concepts and their views regarding educational matters.

A survey was planned to be conducted with the alumni students of NDU. However, contacts with them were not possible. The Alumni committee is preparing an index with all the graduates of NDU till the present date. As the index is still not finished it was not possible to use any of its information to contact former students. It would have been interesting to get the opinions of people who had to time to look back at their college years with more insight.

CHAPTER FIVE

RECOMMENDATIONS AND CONCLUSIONS

The survey conducted with students at NDU revealed an interesting truth. 41.7% of the students chose NDU because it was affordable. This choice criterion was by far the most mentioned one (the second comes in with 19.9% of votes). The question here is do we really want this? Do we want students to choose NDU just because it is affordable to them?

If the answer is negative, it is therefore imperative to change the way people perceive NDU. Our aim should be to make NDU a quality driven institution that provides quality teaching and services.

So far, this research has shed the light on the different areas of concern at the university. Accordingly, some recommendations and suggestions have become possible.

Quality principles cannot be applied if the whole institutional culture is not changed accordingly. Employees must change the way they perceive things and act in a way to satisfy their direct customers, i.e. the students. So far, the only concern has been to avoid getting into trouble and staying in good terms with the direct supervisor and the top management. The changes that need to be made here cannot be effective unless management really shows good intention and encourages employees to change their perceptions and act accordingly. What would be helpful is hiring a person from outside the university, a person who is completely unaware of the existing culture within the institution. A perfect candidate would be a high executive from a business entity already familiar with quality concepts and applying them. Of course this new person would have to have the support of top management in order to be credible with the employees who are very sensitive to the hierarchy. These efforts, coupled with the proper staff training on quality concepts have good

chances of succeeding. The administrative staff could also take management courses at the university and get acquainted with the modern managerial principles and techniques. This will help them within the context of their work.

Moreover, it is important to develop a vision and a mission statement with the collaboration of all the parties concerned: the administration, the faculty, the students, the alumni, etc. The process will not be easy; it will take time to come up with an outcome that will suit all the parties concerned. This is a way to encourage teamwork and let all parties feel that they have a saying in the future of their university.

Another step on the journey to quality is to identify the critical processes and try to improve them. The administrative processes can be improved in ways to become more effective and efficient. Special teams could be formed to work on this project. The teams must include people from top management, the administration, the faculty and the students of course, whether current or alumni. The joint efforts can only come up with useful results. Again, top management's role is important here in the sense that it should offer the necessary support.

Among the processes that need improvements is the registration process. As shown in the study, it has many weaknesses and students are aware of them and they are complaining. Currently the main issue is to have an online system that would ensure complete registration from the advisor's office without further obstacles. This way if there is a problem (like if a class is full) it will be solved on the spot by switching to another course.

The computer center is another area where improvements need to be brought. The main issue is the lack of equipment and the unavailability of the computer center's resources to all students whenever they need them. It is not logical to have only 7 machines in the Internet lab knowing that the use of Internet is becoming more indispensable especially for the research projects. Other concerns regarding the computer center are the specialized

business applications. The dean of the business school believes that there should be more room for business applications in the computer center, with the proper machines for them. Why not have special labs for business like the ones dedicated for the computer science or the engineering courses? Most business courses nowadays require the use of software applications, and there is not enough room for that.

The increased demand for the Internet is a setback for the lack of a proper library with all the necessary sources. The library administration is well aware of that, and they are trying their best to improve on the current situation. The process is a bit slow, but it should be noted that they have recently moved to a new location and they need time to reorganize everything. So far the library has witnessed some shy attempts to improve on the current situation. Students will start feeling the difference and counting on the library as a necessary complement in their courses only when they see some major changes happening.

We should note that NDU is a relatively young university. It has witnessed many changes in the recent years and this is still the case. First there was the addition of the engineering faculty, then the shift to the new campus, which is still incomplete. Systems and processes are still under study for improvement. So the university and especially the administration is not a stable field. There are continuous changes, adaptations, and additions. Therefore, it is somehow difficult to suggest improvements in an environment that has not been totally committed to quality.

Providing quality education to students cannot be done without having dedicated faculty members. To have dedicated faculty members, a proper environment must be assured for their development, which will reflect on the students' development as well. The minimum required is providing proper settings and backup so that faculty members carry on their duties the best way possible. So far, the lack of comfort in the classrooms and in the offices has had negative impact on the instructors, and on the students for that matter.

Moreover, and as one department chairman said, there is no proper "backup" for the academic functions. By backup he means the administrative staff in the faculties (i.e. secretaries, administrative assistants, etc.), many of them lack the proper qualifications and basic skills needed to perform a good job assisting the faculty members. If the university is not planning on reshuffling its personnel, at least there should be proper training for the existing personnel. To stay in the area of training, the faculty members must also be trained on quality concepts and possible ways to apply them in the classroom. Moreover, instructors could be trained on testing methods and the understanding of the students' studying habits. Most students adopt studying techniques that match the testing method of their instructors. So far most instructors are often not finding comprehensive ways to test their students. The tests are either case applications of the material taught, or questions requiring memory and recall. Either way, the retention rates of the material taught are not as good as they should be. The majority of students evaluate their retention rates between 25% and 75%. Rare are those who mentioned the highest bracket, i.e. 76% to 100%. This could be an indicator that the teaching methods of instructors are not very effective. In that context, having professional people as instructors can be very beneficial to students. This is true especially in the business field. Theory alone is not enough. Students need to have real life examples and more specifically examples from the Lebanese market. If having professionals is not feasible, then the actual faculty members should have internships in companies from time to time, as Mr. Iskandar from Fattal Group had previously mentioned. This way they would combine their theoretical knowledge with practical experience. Most students agreed that this combination made better instructors.

And as we speak of internship, it should be noted that most if not all the recruitment professionals interviewed agreed that university programs should make more room for internship hours. Practical experience while still in university helps students put the theories

they are learning in their practical frame and therefore they would have a better and clearer understanding of the whole matter.

Universities should constantly survey the market and collaborate with major business entities in order to improve their programs. This is becoming an essential step, especially in the present economic recession, where graduates struggle to find suitable jobs. Universities must thrive to provide their students with the edge that will help them get employed. In that context, the dean of the Faculty of Business Administration and Economics at Haigazian University encourages students to establish a network of contacts. Special gatherings are organized where former students are invited with their employers to meet the new group of graduates. This way, students make contacts; they get ideas for their future career plans, etc. On the other hand, the Lebanese American University (LAU) issues every year an index called "BioData" where all LAU graduates are listed with all the data that could be useful for future employers. This index is distributed to the major companies in Lebanon and the region as well (Noueihed, 2000). These are examples of the efforts undertaken by other universities in order to help as much as they can their graduates in their job search. NDU should think about similar steps, even if it meant following what others do; after all benchmarking is an important process in the journey to reach quality services. We should recognize a good idea when we see one. Moreover, NDU offers a variety of unconventional majors and it should build on that particular aspect. The market is saturated with the conventional majors like Medicine, Engineering and Law. A thorough survey of the Lebanese market should be done in order to determine the majors that are really needed. That way, if we do not have them at NDU, then we would consider adding them. But if we have them, then we should orient students towards those majors, and they will at least be sure to find job openings upon graduation.

The programs offered by NDU should always be examined and amended so as to meet the changing demands of the market and the global environment. In that context new courses should always be innovated and added to the existing curriculum. This of course requires faculty members to be always ahead in their knowledge. In that context, Dr. Ameen Rihani, the Vice President for Academic Affairs says that the professors of NDU must meet new requirements if they are to continue contributing to the university's academic life. Research and publications are becoming a must for the personal and academic development. Professors are expected to publish books or refereed articles in international journals. Moreover, new evaluation processes are being established. Questionnaires are prepared regarding the professors' performances. Those questionnaires will be filled by the students, the colleagues and the deans and chairpersons. Dr. Rihani says that this is an already existing process, but now it has 3 new aspects:

- Results are computerized.

- There are more comprehensive questions. The questionnaires have a larger number of questions so that they can get a broader view of the situation.

- Comparisons will be made with previous results obtained from previous evaluation processes.

However, the evaluation process should take place early during the semester in order to be able to improve on the weak points before it is too late.

In addition, professors are encouraged to be involved in activities at universities' level and at the community's level, especially in business and professional associations. This opens the doors to more research opportunities and more opportunities to take part in conferences and seminars. What would the students benefit from this? "Well a recommendation from a professor member in a professional association is better seen than one from a non-member professor", says Dr. Rihani.

However, encouraging professors too much to do more research and requiring publications may lead some of them to focus on this side of their careers at the expense of effective teaching, in order to secure their position in the university.

It may be interesting to note the strategy and action plan that the chairman of the Hotel Management and Tourism Department (Mr. Youssef Zgheib) has introduced to render effective teaching in his department.

The preparation of Hotel Management students begins with the very first class they take related to their major, HTM 201. During the first 2 to 3 weeks of the course, students are informed about the career they have chosen, every little detail is mentioned, the good and the bad sides of the profession, the difficulties they will encounter, etc. It is very important that students know what to expect. If they thought they would end up a hotel manager right after graduation, then it is essential that they get the real picture, which is that they have to start from the bottom.

The practical aspect is very much emphasized in the Hotel Management major. Most instructors are active and successful professionals in the field; they hold executive positions, and they hold a good academic background as well. This is very important, in that students get acquainted with real examples, issues that their instructors are experiencing in real life; theory is important, but in that field, practice is even more so.

Also, some instructors are involved in the public sector as well. Students get also the point of view from the public sector's perspective, and since they already have the point of view of the private sector (through their other instructors), they get practically most of the picture.

The department has made good contacts with different hotels and institutions that would allow students to carry on the projects required in the context of different courses, and to have a place for their internship and training.

In that context, and in fulfillment of the HTM 203 course, there was a field visit to the Beirut International Airport. Students were allowed to see the back office of the airport, not as passengers view the airport facilities. They went to the control tower; they inspected the luggage retrieval system, and got to see all the inside operations. A deal was also made with the harbor authorities allowing students to visit cruise ships and inspect their operations.

Other than field visits, the courses require a big amount of projects based on real experience. For example, in course HTM 451, a project is called "shadow-manager". The student is assigned to follow around a manager at a hotel during a whole day. The purpose of this project is to understand the job of this manager, and at the same time have another view of the hotel's operations, a view from the perspective of an executive's position. Other kinds of projects include evaluating certain divisions of a hotel, the evaluation of the system of a travel agency, etc. All these projects help students get acquainted with the real working world. Mr. Zgheib said that he is always trying to work on 3 levels: the educators, the professionals and the students.

Guest speakers are often invited to give lectures in the different Hotel Management courses. Those speakers tackle real issues, based on their practical experience. This is also a way of acquainting students with what is really happening in the real business world.

Domestic tourism is emphasized through a series of outings organized by the department for the requirements of a certain course. Students visit renowned touristic sites. Then they have to write reports on what they have seen and evaluate the way those sites are managed, and even propose some improvements.

The department is always innovating in terms of course offerings. Every year, there are at least 2 new courses that are added to the list of offered courses; additions are mainly major electives. Mr. Zgheib believes that there should always be new courses, in order to revive the programs.

On another hand, an important focus is made on the training aspect. Students are required to fulfill significant internship hours. The NDU program of Hotel Management has the highest requirements in terms of internship hours.

For that matter, Mr. Zgheib has managed to establish excellent relationships with many important hotels, in a step to provide students with the training they need. Moreover, students are encouraged to work, if they have the chance of finding a job in the related field; the Department tries to help them as much as possible. Practice is an essential part in this particular field. Some students have managed to have more than one year of experience (between internships and jobs) at the time they graduated.

According to Mr. Zgheib, the Hotel Management program at NDU is the most complete program in the Middle East.

Another point to be mentioned is that some values are taught to students within their normal courses. For example, instructors are asked to "hammer" students about business ethics, good behavior, good self-presentation, etc. in an effort to build better characters. Students could get bonus points if for example they have showed during the semester good behavior, good self-presentation (clothing, neatness), etc.

On the other hand, Mr. Zgheib complains about the lack of facilities provided by the university for the fulfillment of the major requirements. For example, there are no labs for hotel management courses. It is important to show students practical examples and to let them practice them individually.

The Department is partially trying to compensate this lack by renting demo labs in hotels. For example they have rented the services of a Chef, and paid for all his ingredients so that he would demonstrate to students some techniques, and the way certain recipes are prepared. Another way of compensating this lack is by encouraging students to work.

Another issue to be raised is the lack of computer facilities with the software related to Hotel Management courses. It is a shame that a university with the magnitude of NDU has such scarce computer resources. Students need to work on specific applications and software (ticketing, hotel reservations, etc) and the facilities are not enough for all students.

The case of the Hotel Management and Tourism Department has many aspects that other departments may consider worthwhile to emulate.

Finally, the efforts of the university alone are not enough to make it a quality-oriented institution. Students have a big role to play in the process. They are the ones who will reflect the image of their university. Moreover, even with all the good intentions in the world, instructors cannot force students to learn if they do not want to.

So as much as we make recommendations to improve the processes and the programs at NDU, it will not pay off without the commitment of top management, the administration, the faculty members and to a certain extent the students. Without the feedback of students (i.e. customers) the administration and faculty cannot know to what extent they are doing well.

This project may not have all the answers to our existing problems. However, it is hoped it will be the starting point to a broader quality-oriented project for the improvement of both the working and the educational environments at NDU. Further research could be done on more detailed levels like the library, the computer center, etc.

Hopefully, this project has contributed to the understanding and appreciation of the educational culture at NDU and the need for its improvement.

APPENDIX A

1 Age: 17-19
             20-22
             23-25
             26 and above

2 Gender: Male
             Female

3 University level:
             Freshman
             Sophomore
             Junior
             Senior
             Graduate student

4 School:
             Business and Economics
             Arts and Sciences
             Humanities
             Engineering

5 Major:

6 Why did you choose NDU?
             Affordable
             Good teachers and teaching methods
             Good grades are easy to get
             The only place where you were accepted
             To be with friends who got in
             It was recommended to you
             Close to work
             Other (specify...):

7 Advisors are very helpful and always there for you.
             I strongly agree.
             I agree.
             I disagree.
             I strongly disagree.

8 Deans are fair in dealing with students' problems and issues.
             I strongly agree.
             I agree.
             I disagree.
             I strongly disagree.

9 Department chairmen are fair in dealing with students' problems and issues.
             I strongly agree.
             I agree.
             I disagree.
             I strongly disagree.

10   The administrative staff at NDU are friendly and welcoming.
             I strongly agree.
             I agree.
             I disagree.
             I strongly disagree.

11   The administrative staff at NDU are efficient in responding to students' needs and demands.
             I strongly agree.
             I agree.
             I disagree.
             I strongly disagree.

12   Evaluate the registration process at NDU:
             Very efficient.
             Could use minor improvements.
             Could use major improvements.
             Inefficient.

13   What you learn at NDU is very useful for the real business world.
             I strongly agree.
             I agree.
             I disagree.
             I strongly disagree.

14   The program of my major has a lot of unnecessary courses.
             I strongly agree.
             I agree.
             I disagree.
             I strongly disagree.

15   How often do you go to the library?
             Often.
             From time to time.
             Rarely.
             Never.

16   The library at NDU is useful and helpful in my studies.
             I strongly agree.
             I agree.
             I disagree.
             I strongly disagree.

17   Do you believe that the teaching methods of your faculty help you retain the information
      you receive, and to what extent?
             Yes and to an extent of (indicate %)
             No

18   If you were to evaluate the students of a class, on what basis would you do that?
             Based on the progress the student showed during the semester, disregarding
                    the exams' results.
             Based on the exams' results alone.
             Based on both exams' results and the progress showed during the semester.
             Participation.

19   If there were no grades in classes, do you think students will:
          work harder.
          work as hard as before.
          work less than before.
          Will not work at all.

20   A good teacher must be judged more by his delivery of knowledge (i.e. teaching methods)
      than by his grades.
          I strongly agree.
          I agree.
          I disagree.
          I strongly disagree.

21   A good teacher must be judged more by his degrees than by his delivery of knowledge
      (I.e. teaching methods).
          I strongly agree.
          I agree.
          I disagree.
          I strongly disagree.

22   The holder of many reputable degrees must be a good teacher.
          I strongly agree.
          I agree.
          I disagree.
          I strongly disagree.

23   Practical experience added to academic background and achievements make a better
      teacher.
          I strongly agree.
          I agree.
          I disagree.
          I strongly disagree.

24   Rank the following characteristics of a teacher in order of importance.
          Holder of high degrees.
          Good communicator.
          Has practical experience (as opposed to theory).
          Friendly and easy going with students.
          Has strong personality and charisma.

25   Do you go to the cafeteria?
          Yes
          No

26   Why do you go to the cafeteria?
          For food.
          To hang out with friends.
          To study.
          To kill time between courses.
          Other (specify):

27   Evaluate the cafeteria's settings:
          Very good.
          Good.
          Fair.
          Bad.

28   Evaluate the cafeteria's food:
              Very good.
              Good.
              Fair.
              Bad.

29   Evaluate the cafeteria's price/quality ratio:
              Very good.
              Good.
              Fair.
              Bad.

30   Do you use the computer center?
              Yes
              No

31   The computer center is accessible any day and any time.
              I strongly agree.
              I agree.
              I disagree.
              I strongly disagree.

32   Did you ever have a problem in accessing the computer center when you needed to?
              Yes
              No

33   If yes, what was the problem and why do you think it existed?
              There was no room available For you.
              It was closed.
              You had problems with The access code.
              Other (specify)

34   The classrooms at NDU are very comfortable in all weather conditions.
              I strongly agree.
              I agree.
              I disagree.
              I strongly disagree.

35   NDU does not lack any equipment or materials needed for the good pursuit of the
       courses.
              I strongly agree.
              I agree.
              I disagree.
              I strongly disagree.

36   The parking space at NDU is sufficient for all students.
              I strongly agree.
              I agree.
              I disagree.
              I strongly disagree.

37   The parking at NDU is practical and easily accessible.
              I strongly agree.
              I agree.
              I disagree.
              I strongly disagree.

38   Do you think there is a problem in the parking system at NDU?
             Yes
             No

39   If yes, what is the problem in your opinion? (You can have multiple answers)
             It is far From The campus.
             It Has no sufficient space For all students.
             It is not practical For handicapped people.
             It is not well organized.
             Other: (specify)

40   Do you think students should pay for parking at NDU?
             Yes
             No

41   Do you think a building reserved for parking would resolve the problem?
             Yes
             No

42   Do you think building that kind of parking would be costly?
             Yes
             No

43   If this project was done, do you think students should pay to park in it?
             Yes
             No

44   Would you agree to pay a parking fee against a reserved parking space for you?
             Yes
             No

45   Like any regular university, NDU should have sports facilities.
             I strongly agree.
             I agree.
             I disagree.
             I strongly disagree.

46   Sports activities at NDU are encouraged and facilitated.
             I strongly agree.
             I agree.
             I disagree.
             I strongly disagree.

47   There should be playgrounds for sports activities to be practiced at NDU.
             I strongly agree.
             I agree.
             I disagree.
             I strongly disagree.

48   Do you know that you can practice sports outside NDU?
             Yes
             No

49   The availability of sports activities to NDU students should be more emphasized.
             I strongly agree.
             I agree.
             I disagree.
             I strongly disagree.

50   NDU enjoys various student social activities.
                I strongly agree.
                I agree.
                I disagree.
                I strongly disagree.

51   NDU should have more inter-collegiate activities.
                I strongly agree.
                I agree.
                I disagree.
                I strongly disagree.

52   NDU should be more involved with national campaigns such as Red Cross, Caritas,
      environmental activities, etc.
                I strongly agree.
                I agree.
                I disagree.
                I strongly disagree.

Faculty Questionnaire

1   School

2   Levels taught:
        Undergraduate
        Graduate

3   Students are only concerned with getting grades.
        I strongly agree
        I agree
        I disagree
        I strongly disagree

4   Do you set the syllabus:
        On your own?
        With other professors?
        With the administration?
        With the dean?
        Other ...

5   Do you choose the course material to be taught?
        Yes
        No

6   Do you choose textbooks?
        Yes
        No

7   If not, who chooses the textbooks? Are they chosen by the administration?

8   The administration is lenient in case a teacher wants to bring some changes to the course he/she is giving.
        I strongly agree
        I agree
        I disagree
        I strongly disagree

9   Teachers are allowed freedom to act regarding their course material.
        I strongly agree
        I agree
        I disagree
        I strongly disagree

10   Teachers are allowed freedom to act regarding the grading system and method they apply in their classroom.
        I strongly agree
        I agree
        I disagree
        I strongly disagree

11   The university tolerates novel teaching ideas and methods in classrooms.
        I strongly agree
        I agree
        I disagree

I strongly disagree

12 I rate the facilities provided at NDU (settings, equipment, etc.) as:
    Very adequate
    Adequate
    Poorly adequate
    Not adequate at all

13 The administration usually responds to our suggestions for improving the facilities:
    Very favorably
    Favorably
    Poorly favorably
    Unfavorably

14 I consider the number of students in undergraduate classes as:
    Very adequate
    Adequate
    Poorly adequate
    Not adequate at all

15 I consider the number of students in graduate classes as:
    Very adequate
    Adequate
    Poorly adequate
    Not adequate at all

16 Classes should be homogeneous in terms of students' IQ levels.
    I strongly agree
    I agree
    I disagree
    I strongly disagree

17 Classes should be homogeneous in terms of students' backgrounds.
    I strongly agree
    I agree
    I disagree
    I strongly disagree

18 Classes should be homogeneous in terms of "students' willingness to learn".
    I strongly agree
    I agree
    I disagree
    I strongly disagree

19 Salaries at NDU are very attractive for teachers.
    I strongly agree
    I agree
    I disagree
    I strongly disagree

20   Benefits at NDU are very attractive for teachers.
    I strongly agree
    I agree
    I disagree
    I strongly disagree

21   Teachers gain a lot when conferring with each other.
    I strongly agree
    I agree
    I disagree
    I strongly disagree

22   There is an open and cordial relationship among faculty at NDU.
    I strongly agree
    I agree
    I disagree
    I strongly disagree

23   There is an open and cordial relationship between the faculty and the administration at NDU.
    I strongly agree
    I agree
    I disagree
    I strongly disagree

24   Good students are those who get good grades.
    I strongly agree
    I agree
    I disagree
    I strongly disagree

1   Age: 18-24
                              25-34
                              35-44
                              45 & above

2   Gender: Male
                              Female

3   Education: Bacc II
                              Diploma
                              University degree
                              Higher studies

4   Family status: Married
                              Single
                              Divorced
                              Widowed

5   Years of service: 1 to 3 years
                              4 to 6 years
                              7 to 9 years
                              10 years and more

6   Dealing with students: Direct
                                      Indirect

7   Is your income a source of satisfaction to you?
                              Yes
                              No

8   Is your work schedule enough for you to finish everything you have to do daily?
                              Yes
                              No

9   What are your tasks?

10   Students expect a lot when dealing with me.
                              I strongly agree
                              I agree
                              I disagree
                              I strongly disagree

11   Students must understand the problems we face.
             I strongly agree
             I agree
             I disagree
             I strongly disagree

12   It is not logical that students expect a quick response to all their requests.
             I strongly agree
             I agree
             I disagree
             I strongly disagree

13   Students must accept the way we proceed with all requests without complaining.
             I strongly agree
             I agree
             I disagree
             I strongly disagree

14   The university policy includes a quality control system.
             I strongly agree
             I agree
             I disagree
             I strongly disagree

15   Top administration is interested in quality.
             I strongly agree
             I agree
             I disagree
             I strongly disagree

16   Training on quality in "customer" (students) services is given at my level.
             I strongly agree
             I agree
             I disagree
             I strongly disagree

17   Management is always concerned in surveying customers (students) to learn about their needs and demands.
             I strongly agree
             I agree
             I disagree
             I strongly disagree

18   We totally believe in quality to be inherently present in our services.
             I strongly agree
             I agree
             I disagree
             I strongly disagree

19   Achieving good quality is a continuous process.
             I strongly agree
             I agree
             I disagree
             I strongly disagree

20   Is there any evaluation system in the university?
             Yes

No

21   If yes, how is the evaluation system defined and implemented?

22   Quality is an investment, not a cost.
I strongly agree
I agree
I disagree
I strongly disagree

23   Exchanging opinions and information in our institution is free and open.
I strongly agree
I agree
I disagree
I strongly disagree

24   I have the authority to make decisions.
I strongly agree
I agree
I disagree
I strongly disagree

25   I believe I should share in the decision-making.
I strongly agree
I agree
I disagree
I strongly disagree

26   The university administration should overlook some mistakes as long as we learn from
them.
I strongly agree
I agree
I disagree
I strongly disagree

27   How often do you ask your colleagues for advice in matters related to your tasks and
responsibilities?
Always
Sometimes
Rarely
Never

28   One produces better when working alone.

I strongly agree
I agree
I disagree
I strongly disagree

29   How often do you need to work in a team?
Always
Sometimes
Rarely
Never

30   Teamwork helps all members achieve better results.
I strongly agree
I agree
I disagree
I strongly disagree

31   Teamwork means better quality in products, customer services and higher revenues for the institution.
I strongly agree
I agree
I disagree
I strongly disagree

32   Giving more decision-making power to all employees within the limits of the University policy improves employee satisfaction.
I strongly agree
I agree
I disagree
I strongly disagree

33   An employee with decision-making power can provide clients (students) with quality services.
I strongly agree
I agree
I disagree
I strongly disagree

34   More decision-making power means more work load and more responsibility towards clients (students), supervisors and colleagues.
I strongly agree
I agree
I disagree
I strongly disagree

35   Knowing what decision-making power entails (question 34), are you willing to go through more responsibility?
Yes
No

36   Arrange the following issues by priority to you personally in the context of your job
(1=top priority; 5=lowest priority)
Excellent team relationship
Speed in carrying on operations
Satisfying the direct supervisor
Error-free service
Excellent interaction with students and other customers
Salary

37   Arrange according to priority of solving the following problems:
                        A colleague who is upset
                        A direct supervisor who is upset
                        You are upset
                        A client is upset
                        The team is upset

38   Is there a reward system at NDU related to your performance?
                        Yes
                        No

39   The existence of a reward system in any university, like any other institution, is essential.
                        I strongly agree
                        I agree
                        I disagree
                        I strongly disagree

40   What is in your opinion the best way to reward employees?
                        Verbal appreciation
                        Financial reward
                        Employee of the month reward
                        Other (specify)

APPENDIX B

Appendix B1: Faculty questionnaire results

Q1 - School

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Business & Economics	12	44.4	44.4	44.4
	Natural & applied sciences	7	25.9	25.9	70.4
	Humanities	6	22.2	22.2	92.6
	Engineering	2	7.4	7.4	100.0
	Total	27	100.0	100.0	

Q2 - Levels taught

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Undergraduate	19	70.4	70.4	70.4
	Graduate & undergraduate	7	25.9	25.9	96.3
	Graduate	1	3.7	3.7	100.0
	Total	27	100.0	100.0	

Q3 - students are only concern with grades

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	7	25.9	25.9	25.9
	I agree	13	48.1	48.1	74.1
	I disagree	7	25.9	25.9	100.0
	Total	27	100.0	100.0	

Q4 - how do you set the syllabus?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	On your own	9	33.3	33.3	33.3
	with other professors	15	55.6	55.6	88.9
	with the administration	1	3.7	3.7	92.6
	with the dean	2	7.4	7.4	100.0
	Total	27	100.0	100.0	

Q5 - do U choose the course material to be taught?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	20	74.1	74.1	74.1
	No	7	25.9	25.9	100.0
	Total	27	100.0	100.0	

Q6 - do you choose textbooks?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	21	77.8	77.8	77.8
	No	6	22.2	22.2	100.0
	Total	27	100.0	100.0	

Q7 - if not, who does?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	the dean	1	3.7	20.0	20.0
	the department chairperson	4	14.8	80.0	100.0
	Total	5	18.5	100.0	
Missing	N/A	22	81.5		
Total		27	100.0		

Q8 - the administration is lenient with changes brought to the course

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	7	25.9	25.9	25.9
	I agree	14	51.9	51.9	77.8
	I disagree	5	18.5	18.5	96.3
	I strongly disagree	1	3.7	3.7	100.0
	Total	27	100.0	100.0	

Q9 - the administration is lenient with changes brought to the course material

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	5	18.5	18.5	18.5
	I agree	14	51.9	51.9	70.4
	I disagree	8	29.6	29.6	100.0
	Total	27	100.0	100.0	

Q10 - teachers have freedom to act with the grading system

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	1	3.7	3.7	3.7
	I agree	14	51.9	51.9	55.6
	I disagree	8	29.6	29.6	85.2
	I strongly disagree	4	14.8	14.8	100.0
	Total	27	100.0	100.0	

Q11 - the univeristy tolerates novel teaching ideas & methods.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	5	18.5	19.2	19.2
	I agree	18	66.7	69.2	88.5
	I disagree	2	7.4	7.7	96.2
	I strongly disagree	1	3.7	3.8	100.0
	Total	26	96.3	100.0	
Missing	I don't know	1	3.7		
Total		27	100.0		

Q12 - rate the facilities provided at NDU

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very adequate	2	7.4	7.4	7.4
	Adequate	10	37.0	37.0	44.4
	Poorly adequate	13	48.1	48.1	92.6
	Not adequate at all	2	7.4	7.4	100.0
	Total	27	100.0	100.0	

Q13 - the administration responds to suggestions regarding facilities:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very favorably	1	3.7	3.8	3.8
	favorably	13	48.1	50.0	53.8
	Poorly favorably	10	37.0	38.5	92.3
	unfavorably	2	7.4	7.7	100.0
	Total	26	96.3	100.0	
Missing	I don't know	1	3.7		
Total		27	100.0		

Q14 - the number of students in undergraduate classes is

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very adequate	4	14.8	15.4	15.4
	Adequate	10	37.0	38.5	53.8
	Poorly adequate	10	37.0	38.5	92.3
	Not adequate at all	2	7.4	7.7	100.0
	Total	26	96.3	100.0	
Missing	N/A	1	3.7		
Total		27	100.0		

Q15 - the number of students in graduate classes is

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very adequate	2	7.4	20.0	20.0
	Adequate	7	25.9	70.0	90.0
	Poorly adequate	1	3.7	10.0	100.0
	Total	10	37.0	100.0	
Missing	N/A	16	59.3		
	I don't know	1	3.7		
	Total	17	63.0		
Total		27	100.0		

Q16 - classes should be homogeneous: IQ level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	3	11.1	11.1	11.1
	I agree	9	33.3	33.3	44.4
	I disagree	10	37.0	37.0	81.5
	I strongly disagree	4	14.8	14.8	96.3
	98	1	3.7	3.7	100.0
	Total	27	100.0	100.0	

Q17 - classes should be homogeneous: student background

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	3	11.1	11.1	11.1
	I agree	13	48.1	48.1	59.3
	I disagree	8	29.6	29.6	88.9
	I strongly disagree	3	11.1	11.1	100.0
	Total	27	100.0	100.0	

Q18 - classes should be homogeneous: willingness to learn

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	2	7.4	8.0	8.0
	I agree	13	48.1	52.0	60.0
	I disagree	8	29.6	32.0	92.0
	I strongly disagree	2	7.4	8.0	100.0
	Total	25	92.6	100.0	
Missing	I don't know	2	7.4		
Total		27	100.0		

Q19 - Salaries are very attractive for teachers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I agree	4	14.8	14.8	14.8
	I disagree	17	63.0	63.0	77.8
	I strongly disagree	6	22.2	22.2	100.0
	Total	27	100.0	100.0	

Q20 - Benefits are very attractive for teachers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I agree	14	51.9	51.9	51.9
	I disagree	10	37.0	37.0	88.9
	I strongly disagree	3	11.1	11.1	100.0
	Total	27	100.0	100.0	

Q21 - teachers gain a lot when conferring with each other

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	4	14.8	16.0	16.0
	I agree	17	63.0	68.0	84.0
	I disagree	3	11.1	12.0	96.0
	I strongly disagree	1	3.7	4.0	100.0
	Total	25	92.6	100.0	
Missing	I don't know	2	7.4		
Total		27	100.0		

Q22 - there is an open & cordial relationship among faculty

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	4	14.8	14.8	14.8
	I agree	17	63.0	63.0	77.8
	I disagree	6	22.2	22.2	100.0
	Total	27	100.0	100.0	

Q23 - there is an Open & cordial relationship between faculty & administration

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	2	7.4	7.4	7.4
	I agree	19	70.4	70.4	77.8
	I disagree	6	22.2	22.2	100.0
	Total	27	100.0	100.0	

Q24 - good students are those who get good grades

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	2	7.4	7.4	7.4
	I agree	13	48.1	48.1	55.6
	I disagree	9	33.3	33.3	88.9
	I strongly disagree	3	11.1	11.1	100.0
	Total	27	100.0	100.0	

Appendix B2: Administration questionnaire results

Q1 - Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	25-34	13	44.8	44.8	44.8
	35-44	8	27.6	27.6	72.4
	18-24	6	20.7	20.7	93.1
	45 & above	2	6.9	6.9	100.0
	Total	29	100.0	100.0	

Q2 - Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	21	72.4	72.4	72.4
	Male	8	27.6	27.6	100.0
	Total	29	100.0	100.0	

Q3 - Education level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	University degree	18	62.1	62.1	62.1
	Diploma	5	17.2	17.2	79.3
	Bacc II	3	10.3	10.3	89.7
	Higher studies	3	10.3	10.3	100.0
	Total	29	100.0	100.0	

Q4 - Family status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Single	16	55.2	55.2	55.2
	Married	13	44.8	44.8	100.0
	Total	29	100.0	100.0	

Q5 - Years of service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 to 3	11	37.9	37.9	37.9
	10 & more	9	31.0	31.0	69.0
	4 to 6	5	17.2	17.2	86.2
	7 to 9	4	13.8	13.8	100.0
	Total	29	100.0	100.0	

Q6 - Dealing with students

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Direct	19	65.5	65.5	65.5
	Indirect	8	27.6	27.6	93.1
	Direct & indirect	2	6.9	6.9	100.0
	Total	29	100.0	100.0	

Q7 -Is your income a source of satisfaction to you?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	14	48.3	48.3	48.3
	No	15	51.7	51.7	100.0
	Total	29	100.0	100.0	

Q8 - Is your daily work schedule enough to finish everything you have to do?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	18	62.1	62.1	62.1
	No	10	34.5	34.5	96.6
	Sometimes	1	3.4	3.4	100.0
	Total	29	100.0	100.0	

Q10 - students expect a lot when dealing with me

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	9	31.0	31.0	31.0
	I agree	19	65.5	65.5	96.6
	I disagree	1	3.4	3.4	100.0
	Total	29	100.0	100.0	

Q11 - students must understand the problems we face

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	7	24.1	25.0	25.0
	I agree	12	41.4	42.9	67.9
	I disagree	9	31.0	32.1	100.0
	Total	28	96.6	100.0	
Missing	I don't know	1	3.4		
Total		29	100.0		

Q12 - students should not expect quick responses

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	3	10.3	10.7	10.7
	I agree	16	55.2	57.1	67.9
	I disagree	9	31.0	32.1	100.0
	Total	28	96.6	100.0	
Missing	I don't know	1	3.4		
Total		29	100.0		

Q13 - students should not complain about our procedures

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	2	6.9	6.9	6.9
	I agree	13	44.8	44.8	51.7
	I disagree	13	44.8	44.8	96.6
	I strongly disagree	1	3.4	3.4	100.0
	Total	29	100.0	100.0	

Q14 - the university policy includes a quality control system

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	2	6.9	7.4	7.4
	I agree	17	58.6	63.0	70.4
	I disagree	7	24.1	25.9	96.3
	I strongly disagree	1	3.4	3.7	100.0
	Total	27	93.1	100.0	
Missing	I don't know	2	6.9		
Total		29	100.0		

Q15 - top administration is interested in quality

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	8	27.6	29.6	29.6
	I agree	17	58.6	63.0	92.6
	I disagree	1	3.4	3.7	96.3
	I strongly disagree	1	3.4	3.7	100.0
	Total	27	93.1	100.0	
Missing	I don't know	2	6.9		
Total		29	100.0		

Q16 - quality training on customer service is given at my level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	4	13.8	15.4	15.4
	I agree	15	51.7	57.7	73.1
	I disagree	6	20.7	23.1	96.2
	I strongly disagree	1	3.4	3.8	100.0
	Total	26	89.7	100.0	
Missing	I don't know	3	10.3		
Total		29	100.0		

Q17 - management is always concerned in surveying customers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	3	10.3	10.7	10.7
	I agree	18	62.1	64.3	75.0
	I disagree	6	20.7	21.4	96.4
	I strongly disagree	1	3.4	3.6	100.0
	Total	28	96.6	100.0	
Missing	I don't know	1	3.4		
Total		29	100.0		

Q18 - quality is inherently present in our services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	12	41.4	41.4	41.4
	I agree	14	48.3	48.3	89.7
	I disagree	2	6.9	6.9	96.6
	I strongly disagree	1	3.4	3.4	100.0
	Total	29	100.0	100.0	

Q19 - achieving good quality is a continuous process

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	16	55.2	55.2	55.2
	I agree	12	41.4	41.4	96.6
	I strongly disagree	1	3.4	3.4	100.0
	Total	29	100.0	100.0	

Q20 - is there any evaluation system in the university?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	10	34.5	43.5	43.5
	No	13	44.8	56.5	100.0
	Total	23	79.3	100.0	
Missing	I don't know	6	20.7		
Total		29	100.0		

Q22 - quality is an investment, not a cost

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	16	55.2	55.2	55.2
	I agree	11	37.9	37.9	93.1
	I disagree	2	6.9	6.9	100.0
	Total	29	100.0	100.0	

Q23 - exchanging opinions & information is free & open

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	11	37.9	40.7	40.7
	I agree	12	41.4	44.4	85.2
	I disagree	3	10.3	11.1	96.3
	I strongly disagree	1	3.4	3.7	100.0
	Total	27	93.1	100.0	
Missing	I don't know	2	6.9		
Total		29	100.0		

Q24 - I have the authority to make decisions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	1	3.4	3.4	3.4
	I agree	13	44.8	44.8	48.3
	I disagree	14	48.3	48.3	96.6
	I strongly disagree	1	3.4	3.4	100.0
	Total	29	100.0	100.0	

Q25 - I believe I should share in the decision-making

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	9	31.0	31.0	31.0
	I agree	17	58.6	58.6	89.7
	I disagree	3	10.3	10.3	100.0
	Total	29	100.0	100.0	

Q26 - mistakes should be overlooked as long as we learn from them

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	11	37.9	39.3	39.3
	I agree	13	44.8	46.4	85.7
	I disagree	3	10.3	10.7	96.4
	I strongly disagree	1	3.4	3.6	100.0
	Total	28	96.6	100.0	
Missing	I don't know	1	3.4		
Total		29	100.0		

Q27 - how often do U ask colleagues for advice?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	10	34.5	34.5	34.5
	Sometimes	13	44.8	44.8	79.3
	Rarely	4	13.8	13.8	93.1
	Never	1	3.4	3.4	96.6
	99	1	3.4	3.4	100.0
	Total	29	100.0	100.0	

Q28 - one produces better when working alone

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	1	3.4	3.4	3.4
	I agree	5	17.2	17.2	20.7
	I disagree	19	65.5	65.5	86.2
	I strongly disagree	4	13.8	13.8	100.0
	Total	29	100.0	100.0	

Q29 - how often do U need to work in a team?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	8	27.6	27.6	27.6
	Sometimes	17	58.6	58.6	86.2
	Rarely	3	10.3	10.3	96.6
	Never	1	3.4	3.4	100.0
	Total	29	100.0	100.0	

Q30 - teamwork helps all members achieve better results

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	11	37.9	37.9	37.9
	I agree	18	62.1	62.1	100.0
	Total	29	100.0	100.0	

Q31 - teamwork means better quality & higher revenues

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	14	48.3	48.3	48.3
	I agree	15	51.7	51.7	100.0
	Total	29	100.0	100.0	

Q32 - giving more decision-making increases employee satisfaction

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	7	24.1	25.0	25.0
	I agree	18	62.1	64.3	89.3
	I disagree	3	10.3	10.7	100.0
	Total	28	96.6	100.0	
Missing	I don't know	1	3.4		
Total		29	100.0		

Q33 - an employee with decision-making power, provides quality services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	6	20.7	21.4	21.4
	I agree	19	65.5	67.9	89.3
	I disagree	2	6.9	7.1	96.4
	I strongly disagree	1	3.4	3.6	100.0
	Total	28	96.6	100.0	
Missing	I don't know	1	3.4		
Total		29	100.0		

Q34 - more decision-making = more work load & more responsibility

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	10	34.5	34.5	34.5
	I agree	17	58.6	58.6	93.1
	I disagree	2	6.9	6.9	100.0
	Total	29	100.0	100.0	

Q35 - given q34, are U willing to have more decision-making power?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	25	86.2	92.6	92.6
	No	2	6.9	7.4	100.0
	Total	27	93.1	100.0	
Missing	I don't know	2	6.9		
Total		29	100.0		

Q36a - personal priority: excellent team relationship

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely important	11	37.9	37.9	37.9
	Very important	6	20.7	20.7	58.6
	Important	5	17.2	17.2	75.9
	Fairly important	3	10.3	10.3	86.2
	Not important	3	10.3	10.3	96.6
	Not important at all	1	3.4	3.4	100.0
	Total	29	100.0	100.0	

Q36b - personal priority: speed in carrying on operations

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely important	5	17.2	17.2	17.2
	Very important	9	31.0	31.0	48.3
	Important	11	37.9	37.9	86.2
	Fairly important	2	6.9	6.9	93.1
	Not important	1	3.4	3.4	96.6
	Not important at all	1	3.4	3.4	100.0
	Total	29	100.0	100.0	

Q36c - personal priority: satisfying direct supervisor

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely important	2	6.9	6.9	6.9
	Very important	7	24.1	24.1	31.0
	Important	3	10.3	10.3	41.4
	Fairly important	8	27.6	27.6	69.0
	Not important	4	13.8	13.8	82.8
	Not important at all	5	17.2	17.2	100.0
	Total	29	100.0	100.0	

Q36d - personal priority: error-free service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely important	5	17.2	17.2	17.2
	Very important	1	3.4	3.4	20.7
	Important	4	13.8	13.8	34.5
	Fairly important	5	17.2	17.2	51.7
	Not important	2	6.9	6.9	58.6
	Not important at all	12	41.4	41.4	100.0
	Total	29	100.0	100.0	

Q36e - personal prirority: excellent interaction with customers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely important	9	31.0	31.0	31.0
	Very important	5	17.2	17.2	48.3
	Important	5	17.2	17.2	65.5
	Fairly important	6	20.7	20.7	86.2
	Not important	1	3.4	3.4	89.7
	Not important at all	3	10.3	10.3	100.0
	Total	29	100.0	100.0	

Q36f - personal priority: salary

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely important	3	10.3	10.3	10.3
	Important	1	3.4	3.4	13.8
	Fairly important	3	10.3	10.3	24.1
	Not important	17	58.6	58.6	82.8
	Not important at all	5	17.2	17.2	100.0
	Total	29	100.0	100.0	

Q37a - priority of problem-solving: a colleague is upset

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very important	7	24.1	24.1	24.1
	Important	2	6.9	6.9	31.0
	Fairly important	9	31.0	31.0	62.1
	Not important	9	31.0	31.0	93.1
	Not important at all	2	6.9	6.9	100.0
	Total	29	100.0	100.0	

Q37b - priority of problem-solving: a direct supervisor is upset

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very important	4	13.8	13.8	13.8
	Important	10	34.5	34.5	48.3
	Fairly important	4	13.8	13.8	62.1
	Not important	6	20.7	20.7	82.8
	Not important at all	5	17.2	17.2	100.0
	Total	29	100.0	100.0	

Q37c - priority of problem-solving: You are upset

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very important	4	13.8	13.8	13.8
	Important	1	3.4	3.4	17.2
	Fairly important	4	13.8	13.8	31.0
	Not important	3	10.3	10.3	41.4
	Not important at all	17	58.6	58.6	100.0
	Total	29	100.0	100.0	

Q37d - priority of problem-solving: a client is upset

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very important	16	55.2	55.2	55.2
	Important	6	20.7	20.7	75.9
	Fairly important	2	6.9	6.9	82.8
	Not important	5	17.2	17.2	100.0
	Total	29	100.0	100.0	

Q37e - priority of problem-solving: the team is upset

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very important	4	13.8	13.8	13.8
	Important	9	31.0	31.0	44.8
	Fairly important	8	27.6	27.6	72.4
	Not important	4	13.8	13.8	86.2
	Not important at all	4	13.8	13.8	100.0
	Total	29	100.0	100.0	

Q38 - is there a performance-related reward system?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	10	34.5	40.0	40.0
	No	15	51.7	60.0	100.0
	Total	25	86.2	100.0	
Missing	I don't know	4	13.8		
Total		29	100.0		

Q39 - A reward system is essential in any university

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	22	75.9	75.9	75.9
	I agree	7	24.1	24.1	100.0
	Total	29	100.0	100.0	

Q40 - what is the best reward for employees?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Financial reward	19	65.5	67.9	67.9
	Verbal appreciation	5	17.2	17.9	85.7
	Employee of the month	4	13.8	14.3	100.0
	Total	28	96.6	100.0	
Missing	I don't know	1	3.4		
Total		29	100.0		

Appendix B3: Students on Campus questionnaire results

Q1 - Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-22	138	63.9	63.9	63.9
	23-25	40	18.5	18.5	82.4
	17-19	33	15.3	15.3	97.7
	26 & above	5	2.3	2.3	100.0
	Total	216	100.0	100.0	

Q2 - Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	120	55.6	55.6	55.6
	Female	96	44.4	44.4	100.0
	Total	216	100.0	100.0	

Q3 - University Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Senior	78	36.1	36.1	36.1
	Junior	74	34.3	34.3	70.4
	Sophomore	60	27.8	27.8	98.1
	Graduate	3	1.4	1.4	99.5
	Freshman	1	.5	.5	100.0
	Total	216	100.0	100.0	

Q4 - School

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Business & Economics	97	44.9	44.9	44.9
	Humanities	57	26.4	26.4	71.3
	Engineering & Architecture	44	20.4	20.4	91.7
	Natural & Applied Sciences	18	8.3	8.3	100.0
	Total	216	100.0	100.0	

Q5 - Major

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	banking & finance	24	11.1	11.1	11.1
	business administration	22	10.2	10.2	21.3
	computer engineering	20	9.3	9.3	30.6
	international affairs & diplomacy	20	9.3	9.3	39.8
	business accounting	16	7.4	7.4	47.2
	advertising & marketing	15	6.9	6.9	54.2
	international business mgt	14	6.5	6.5	60.6
	mechanical engineering	10	4.6	4.6	65.3
	business marketing	10	4.6	4.6	69.9
	graphic design	10	4.6	4.6	74.5
	electrical engineering	7	3.2	3.2	77.8
	business computing	6	2.8	2.8	80.6
	hotel management & tourism	6	2.8	2.8	83.3
	computer information systems	5	2.3	2.3	85.6
	radio/TV	5	2.3	2.3	88.0
	computer science	4	1.9	1.9	89.8
	economics	4	1.9	1.9	91.7
	architecture	4	1.9	1.9	93.5
	english literature	3	1.4	1.4	94.9
	civil engineering	3	1.4	1.4	96.3
	translation & interpretation	3	1.4	1.4	97.7
	journalism	2	.9	.9	98.6
	genetic engineering	1	.5	.5	99.1
	Interior design	1	.5	.5	99.5
	actuarial science	1	.5	.5	100.0
	Total	216	100.0	100.0	

Q6a - why NDU: affordable?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	90	41.7	41.7	41.7
	No	126	58.3	58.3	100.0
	Total	216	100.0	100.0	

Q6b - why NDU: good teachers & teaching methods?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	43	19.9	19.9	19.9
	No	173	80.1	80.1	100.0
	Total	216	100.0	100.0	

Q6c - why NDU: easy good grades?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	5	2.3	2.3	2.3
	No	211	97.7	97.7	100.0
	Total	216	100.0	100.0	

Q6d - why NDU: only place where accepted?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	15	6.9	6.9	6.9
	No	201	93.1	93.1	100.0
	Total	216	100.0	100.0	

Q6e - why NDU: to be with family/ friends?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	27	12.5	12.5	12.5
	No	189	87.5	87.5	100.0
	Total	216	100.0	100.0	

Q6f - why NDU: it was recommended?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	33	15.3	15.3	15.3
	No	183	84.7	84.7	100.0
	Total	216	100.0	100.0	

Q6g - why NDU: close to work?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	14	6.5	6.5	6.5
	No	202	93.5	93.5	100.0
	Total	216	100.0	100.0	

Q6h - why NDU: close to home?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	37	17.1	17.1	17.1
	No	179	82.9	82.9	100.0
	Total	216	100.0	100.0	

Q6i - why NDU: for the major?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	10	4.6	4.6	4.6
	No	206	95.4	95.4	100.0
	Total	216	100.0	100.0	

Q7 - Advisors are very helpful and always there

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	19	8.8	8.8	8.8
	I agree	137	63.4	63.4	72.2
	I disagree	38	17.6	17.6	89.8
	I strongly disagree	22	10.2	10.2	100.0
	Total	216	100.0	100.0	

Q8 - Deans are fair with student problems & issues

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	13	6.0	6.1	6.1
	I agree	95	44.0	44.4	50.5
	I disagree	79	36.6	36.9	87.4
	I strongly disagree	27	12.5	12.6	100.0
	Total	214	99.1	100.0	
Missing	I don't know	2	.9		
Total		216	100.0		

Q9 - Dept. chairmen are fair with student problems & issues

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	21	9.7	10.0	10.0
	I agree	113	52.3	53.6	63.5
	I disagree	50	23.1	23.7	87.2
	I strongly disagree	27	12.5	12.8	100.0
	Total	211	97.7	100.0	
Missing	I don't know	5	2.3		
Total		216	100.0		

Q10 - Administrative staff is friendly and welcoming

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	8	3.7	3.8	3.8
	I agree	106	49.1	49.8	53.5
	I disagree	68	31.5	31.9	85.4
	I strongly disagree	31	14.4	14.6	100.0
	Total	213	98.6	100.0	
Missing	I don't know	3	1.4		
Total		216	100.0		

Q11 - Administration is efficient in responding to needs & demands

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	5	2.3	2.4	2.4
	I agree	119	55.1	56.7	59.0
	I disagree	64	29.6	30.5	89.5
	I strongly disagree	22	10.2	10.5	100.0
	Total	210	97.2	100.0	
Missing	I don't know	6	2.8		
Total		216	100.0		

Q12 - Evaluate the registration process at NDU

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very efficient	18	8.3	8.5	8.5
	Could use minor improvements	63	29.2	29.7	38.2
	Could use major improvements	83	38.4	39.2	77.4
	Inefficient	48	22.2	22.6	100.0
	Total	212	98.1	100.0	
Missing	I don't know	4	1.9		
Total		216	100.0		

Q13 - what you learn is very useful in the business world

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	21	9.7	10.1	10.1
	I agree	141	65.3	68.1	78.3
	I disagree	39	18.1	18.8	97.1
	I strongly disagree	6	2.8	2.9	100.0
	Total	207	95.8	100.0	
Missing	I don't know	9	4.2		
Total		216	100.0		

Q14 - my major's program has many unnecessary courses

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	70	32.4	33.3	33.3
	I agree	89	41.2	42.4	75.7
	I disagree	44	20.4	21.0	96.7
	I strongly disagree	7	3.2	3.3	100.0
	Total	210	97.2	100.0	
Missing	I don't know	6	2.8		
Total		216	100.0		

Q15 - how often do you go to the library?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Often	29	13.4	13.5	13.5
	From time to time	61	28.2	28.4	41.9
	Rarely	86	39.8	40.0	81.9
	Never	39	18.1	18.1	100.0
	Total	215	99.5	100.0	
Missing	I don't Know	1	.5		
Total		216	100.0		

Q16 - Library is useful & helpful in my studies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	11	5.1	5.4	5.4
	I agree	86	39.8	42.0	47.3
	I disagree	73	33.8	35.6	82.9
	I strongly disagree	35	16.2	17.1	100.0
	Total	205	94.9	100.0	
Missing	I don't know	11	5.1		
Total		216	100.0		

Q17a - teaching methods help retain information

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	157	72.7	73.7	73.7
	No	56	25.9	26.3	100.0
	Total	213	98.6	100.0	
Missing	I don't know	3	1.4		
Total		216	100.0		

Q17b - what is the retention ratio of this information (ref. Q17a)?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-25%	5	2.3	4.0	4.0
	26-50%	48	22.2	38.4	42.4
	51-75%	59	27.3	47.2	89.6
	76-100%	13	6.0	10.4	100.0
	Total	125	57.9	100.0	
Missing	N/A	57	26.4		
	I don't know	34	15.7		
	Total	91	42.1		
Total		216	100.0		

Q18 - students should be evaluated based on:

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Progress, disregarding exam results	42	19.4	20.5	20.5
	Exam results	11	5.1	5.4	25.9
	Progress and exam results	130	60.2	63.4	89.3
	Participation	22	10.2	10.7	100.0
	Total	205	94.9	100.0	
Missing	I don't know	11	5.1		
Total		216	100.0		

Q19 - If there were no grades, students will

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	work harder	22	10.2	10.3	10.3
	work as hard as before	24	11.1	11.3	21.6
	work less than before	82	38.0	38.5	60.1
	will not work at all	85	39.4	39.9	100.0
	Total	213	98.6	100.0	
Missing	I don't know	3	1.4		
Total		216	100.0		

Q20 - A good teacher must be judged by his methods, not grades

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	115	53.2	54.0	54.0
	I agree	88	40.7	41.3	95.3
	I disagree	10	4.6	4.7	100.0
	Total	213	98.6	100.0	
Missing	I don't know	3	1.4		
Total		216	100.0		

Q21 - A good teacher must be judged by his degrees, not methods

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	8	3.7	3.8	3.8
	I agree	30	13.9	14.1	17.8
	I disagree	107	49.5	50.2	68.1
	I strongly disagree	68	31.5	31.9	100.0
	Total	213	98.6	100.0	
Missing	I don't know	3	1.4		
Total		216	100.0		

Q22 - the holder of many reputable degrees must be a good teacher

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	5	2.3	2.4	2.4
	I agree	54	25.0	25.6	28.0
	I disagree	116	53.7	55.0	82.9
	I strongly disagree	36	16.7	17.1	100.0
	Total	211	97.7	100.0	
Missing	I don't know	5	2.3		
Total		216	100.0		

Q23 - practical experience & academic achievements make better teachers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	95	44.0	45.2	45.2
	I agree	103	47.7	49.0	94.3
	I disagree	8	3.7	3.8	98.1
	I strongly disagree	4	1.9	1.9	100.0
	Total	210	97.2	100.0	
Missing	I don't know	6	2.8		
Total		216	100.0		

Q24a - teacher characteristic: holder of high degrees

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very important	16	7.4	9.8	9.8
	Important	24	11.1	14.6	24.4
	Fairly important	29	13.4	17.7	42.1
	Not important	33	15.3	20.1	62.2
	Not important at all	62	28.7	37.8	100.0
	Total	164	75.9	100.0	
Missing	I don't know	52	24.1		
Total		216	100.0		

Q24b - teacher characteristic: good communicator

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very important	101	46.8	56.1	56.1
	Important	41	19.0	22.8	78.9
	Fairly important	18	8.3	10.0	88.9
	Not important	17	7.9	9.4	98.3
	Not important at all	3	1.4	1.7	100.0
	Total	180	83.3	100.0	
Missing	I don't know	36	16.7		
Total		216	100.0		

Q24c - teacher characteristic: has practical experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very important	42	19.4	24.9	24.9
	Important	51	23.6	30.2	55.0
	Fairly important	37	17.1	21.9	76.9
	Not important	29	13.4	17.2	94.1
	Not important at all	10	4.6	5.9	100.0
	Total	169	78.2	100.0	
Missing	I don't know	47	21.8		
Total		216	100.0		

Q24d - teacher characteristic: friendly and easy going

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very important	38	17.6	22.6	22.6
	Important	24	11.1	14.3	36.9
	Fairly important	37	17.1	22.0	58.9
	Not important	41	19.0	24.4	83.3
	Not important at all	28	13.0	16.7	100.0
	Total	168	77.8	100.0	
Missing	I don't know	48	22.2		
Total		216	100.0		

Q24e - teacher characteristic: strong personality and charisma

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very important	16	7.4	9.9	9.9
	Important	23	10.6	14.2	24.1
	Fairly important	36	16.7	22.2	46.3
	Not important	35	16.2	21.6	67.9
	Not important at all	52	24.1	32.1	100.0
	Total	162	75.0	100.0	
Missing	I don't know	54	25.0		
Total		216	100.0		

Q25 - do you go to the cafeteria?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	182	84.3	84.3	84.3
	No	34	15.7	15.7	100.0
	Total	216	100.0	100.0	

Q26 - why do you go to the cafeteria?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	for food	78	36.1	41.9	41.9
	to hang out with friends	39	18.1	21.0	62.9
	to study	3	1.4	1.6	64.5
	to kill time between courses	32	14.8	17.2	81.7
	food & killing time	9	4.2	4.8	86.6
	food & hanging out	15	6.9	8.1	94.6
	Killing time & hanging out	8	3.7	4.3	98.9
	water & drinks	2	.9	1.1	100.0
	Total	186	86.1	100.0	
Missing	N/A	30	13.9		
Total		216	100.0		

Q27 - evaluate cafeteria's settings

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very good	6	2.8	2.8	2.8
	good	53	24.5	24.9	27.7
	fair	76	35.2	35.7	63.4
	bad	78	36.1	36.6	100.0
	Total	213	98.6	100.0	
Missing	I don't know	3	1.4		
Total		216	100.0		

Q28 - evaluate cafeteria's food

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very good	3	1.4	1.4	1.4
	good	49	22.7	23.4	24.9
	fair	71	32.9	34.0	58.9
	bad	86	39.8	41.1	100.0
	Total	209	96.8	100.0	
Missing	I don't know	7	3.2		
Total		216	100.0		

Q29 - evaluate cafeteria's price/quality ratio

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very good	8	3.7	3.8	3.8
	good	69	31.9	32.9	36.7
	fair	93	43.1	44.3	81.0
	bad	40	18.5	19.0	100.0
	Total	210	97.2	100.0	
Missing	I don't know	6	2.8		
Total		216	100.0		

Q30 - do you use the computer center?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	120	55.6	55.6	55.6
	No	96	44.4	44.4	100.0
	Total	216	100.0	100.0	

Q31 - the computer center is accessible any day any time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	15	6.9	7.7	7.7
	I agree	90	41.7	46.4	54.1
	I disagree	61	28.2	31.4	85.6
	I strongly disagree	28	13.0	14.4	100.0
	Total	194	89.8	100.0	
Missing	I don't know	22	10.2		
Total		216	100.0		

Q32 - ever had problems accessing the computer center?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	101	46.8	51.5	51.5
	No	94	43.5	48.0	99.5
	99	1	.5	.5	100.0
	Total	196	90.7	100.0	
Missing	N/A	20	9.3		
Total		216	100.0		

Q33 - if yes, what was the problem?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No room available	62	28.7	61.4	61.4
	it was closed	14	6.5	13.9	75.2
	problems with the access code	14	6.5	13.9	89.1
	it was closed & there was no room	5	2.3	5.0	94.1
	there was a computer crash	1	.5	1.0	95.0
	no room & problems with access codes	5	2.3	5.0	100.0
	Total	101	46.8	100.0	
Missing	N/A	110	50.9		
	I don't know	5	2.3		
	Total	115	53.2		
Total		216	100.0		

Q34 - classrooms are comfortable in all weather conditions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	8	3.7	3.8	3.8
	I agree	24	11.1	11.3	15.1
	I disagree	78	36.1	36.8	51.9
	I strongly disagree	102	47.2	48.1	100.0
	Total	212	98.1	100.0	
Missing	I don't know	4	1.9		
Total		216	100.0		

Q35 -there is no lack of equipment or materials needed for the courses

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	7	3.2	3.3	3.3
	I agree	63	29.2	30.0	33.3
	I disagree	87	40.3	41.4	74.8
	I strongly disagree	53	24.5	25.2	100.0
	Total	210	97.2	100.0	
Missing	I don't know	6	2.8		
Total		216	100.0		

Q36 - the parking space is sufficient for all students

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	15	6.9	7.1	7.1
	I agree	67	31.0	31.9	39.0
	I disagree	65	30.1	31.0	70.0
	I strongly disagree	63	29.2	30.0	100.0
	Total	210	97.2	100.0	
Missing	I don't know	6	2.8		
Total		216	100.0		

Q37 - the parking is practical and easily accessible

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	8	3.7	3.8	3.8
	I agree	46	21.3	22.0	25.8
	I disagree	80	37.0	38.3	64.1
	I strongly disagree	75	34.7	35.9	100.0
	Total	209	96.8	100.0	
Missing	I don't know	7	3.2		
Total		216	100.0		

Q38 - is there a problem in the parking system at NDU?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	190	88.0	89.2	89.2
	No	23	10.6	10.8	100.0
	Total	213	98.6	100.0	
Missing	I don't Know	3	1.4		
Total		216	100.0		

Q39a - what is the problem: far from campus?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	125	57.9	63.1	63.1
	No	73	33.8	36.9	100.0
	Total	198	91.7	100.0	
Missing	N/A	18	8.3		
Total		216	100.0		

Q39b - what is the problem: not sufficient for all students?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	87	40.3	43.9	43.9
	No	111	51.4	56.1	100.0
	Total	198	91.7	100.0	
Missing	N/A	18	8.3		
Total		216	100.0		

Q39c - what is the problem: not practical for handicapped?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	60	27.8	30.3	30.3
	No	138	63.9	69.7	100.0
	Total	198	91.7	100.0	
Missing	N/A	18	8.3		
Total		216	100.0		

Q39d - what is the problem: it is not well organized?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	94	43.5	47.5	47.5
	No	104	48.1	52.5	100.0
	Total	198	91.7	100.0	
Missing	N/A	18	8.3		
Total		216	100.0		

Q40 - do you think students should pay for parking?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	21	9.7	9.8	9.8
	No	193	89.4	90.2	100.0
	Total	214	99.1	100.0	
Missing	I don't know	2	.9		
Total		216	100.0		

Q41 - would a parking building resolve the problem?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	157	72.7	77.0	77.0
	No	47	21.8	23.0	100.0
	Total	204	94.4	100.0	
Missing	I don't know	12	5.6		
Total		216	100.0		

Q42 - would such a project (the parking building) be very costly?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	128	59.3	61.5	61.5
	No	80	37.0	38.5	100.0
	Total	208	96.3	100.0	
Missing	I don't know	8	3.7		
Total		216	100.0		

Q43 - if it was done, should students pay to use it?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	78	36.1	37.0	37.0
	No	133	61.6	63.0	100.0
	Total	211	97.7	100.0	
Missing	I don't know	5	2.3		
Total		216	100.0		

Q44 - would You pay a fee against a reserved parking space for you?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	100	46.3	46.9	46.9
	No	113	52.3	53.1	100.0
	Total	213	98.6	100.0	
Missing	I don't know	3	1.4		
Total		216	100.0		

Q45 - NDU should have sports facilities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	134	62.0	62.3	62.3
	I agree	73	33.8	34.0	96.3
	I disagree	7	3.2	3.3	99.5
	I strongly disagree	1	.5	.5	100.0
	Total	215	99.5	100.0	
Missing	I don't know	1	.5		
Total		216	100.0		

Q46 - Sports activities are encouraged & facilitated

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	12	5.6	5.7	5.7
	I agree	80	37.0	38.1	43.8
	I disagree	76	35.2	36.2	80.0
	I strongly disagree	42	19.4	20.0	100.0
	Total	210	97.2	100.0	
Missing	I don't know	6	2.8		
Total		216	100.0		

Q47 - there should be playgrounds for sports activities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	152	70.4	70.7	70.7
	I agree	61	28.2	28.4	99.1
	I disagree	2	.9	.9	100.0
	Total	215	99.5	100.0	
Missing	I don't know	1	.5		
Total		216	100.0		

Q48 - do you know you can practice sports outside NDU?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	127	58.8	58.8	58.8
	No	89	41.2	41.2	100.0
	Total	216	100.0	100.0	

Q49 - the availability of sports activities should be more emphasized

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	113	52.3	53.1	53.1
	I agree	87	40.3	40.8	93.9
	I disagree	8	3.7	3.8	97.7
	I strongly disagree	5	2.3	2.3	100.0
	Total	213	98.6	100.0	
Missing	I don't know	3	1.4		
Total		216	100.0		

Q50 - NDU enjoys various student social activities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	39	18.1	18.5	18.5
	I agree	130	60.2	61.6	80.1
	I disagree	29	13.4	13.7	93.8
	I strongly disagree	13	6.0	6.2	100.0
	Total	211	97.7	100.0	
Missing	I don't know	5	2.3		
Total		216	100.0		

Q51 - NDU should have more inter-collegiate activities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	69	31.9	32.7	32.7
	I agree	125	57.9	59.2	91.9
	I disagree	12	5.6	5.7	97.6
	I strongly disagree	5	2.3	2.4	100.0
	Total	211	97.7	100.0	
Missing	I don't know	5	2.3		
Total		216	100.0		

Q52 - NDU should be more involved in national campaigns

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	I strongly agree	52	24.1	24.5	24.5
	I agree	137	63.4	64.6	89.2
	I disagree	20	9.3	9.4	98.6
	I strongly disagree	3	1.4	1.4	100.0
	Total	212	98.1	100.0	
Missing	I don't know	4	1.9		
Total		216	100.0		

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