

CROSS-CULTURAL PROGRAM EVALUATION OF NEPALI ARCHITECTURE
COURSE THROUGH QUALITATIVE RESEARCH OF ALUMNI

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DEDICATION

This work is dedicated to the Architecture Students of Nepal Engineering College who have made this dissertation possible and who will participate in as well as benefit from the findings of this research in the years to come. May you continue to reach higher.

ABSTRACT

This dissertation entitled: “Cross-Cultural Program Evaluation of Nepali Architecture Course through Qualitative Research of Alumni” uses qualitative research methodology (individual interviews with alumni of three separate graduating classes) as a means of evaluating the effectiveness of an architecture program at a private engineering college located just outside the city limits of Kathmandu, Nepal. Cross-cultural issues were an important aspect of the research as the researcher (a former teacher at the college) is an American while all the students were from Nepal. All interviews were transcribed and the data collected was analyzed primarily using the Constant Comparison/Grounded Theory approach. Triangulation of data from different individuals helped to verify observations and solidify conclusions. The presentation of the research retains individual anonymity of the subjects within the framework that they were all students of architecture in the Department of Architecture at Nepal Engineering College in Bhaktapur, Nepal. Effort was made to explain the epistemological position of the author and comments are included describing possible bias in various stages of the research and analysis process. The findings indicate a high level of success by the graduates of the program, especially in the early years of its existence. Graduates from more recent years describe less satisfaction with their architecture training. The findings from the research lead to specific suggestions for changes/ improvements in the architecture program at Nepal Engineering College.

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CHAPTER 1

Introduction/Problem Statement

When running an educational program, how do you know when you are doing a good job? An excellent job? An average job? An unacceptable job? Is your decision based on the financial bottom line, i.e. we are making a profit? Is your decision based on the number of students who apply for your program? Is your evaluation of your competency based on the performance of your graduates? Is it based on your headlines in the press or your programs ranking compared to other comparable educational institutions? What is, or what should be, the proper means of assessing the effectiveness of an educational program?

A related question, how do you know what and when to change academic programs, curriculum, scheduling, etc.? Are changes made only when a conflict or problem arises, faculty leave or are added, other similar programs begin making changes? What is the basis for altering established norms?

These are important questions for me as I look back on my years in the country of Nepal that were spent starting, running and teaching in an architecture program in a private engineering college in that country. Were we teaching the right material? Did our students learn the knowledge and skills needed to succeed as professional architects? Were we able to adequately prepare them for the rigors of professional practice or further academic training in the various countries to which they have moved since graduation?

How well do our students compare to graduates from other institutions? How do they compare to graduates from architecture programs in different countries?

These are questions that have intrigued me since returning to the United States to pursue doctoral studies. I can see that we need to find a means of assessing and evaluating educational programs that will provide useful measures of competency. Before returning to Nepal to continue architecture teaching after completing this doctoral program, I would like to have some relevant answers to these questions.

This research is a continuation, in a way, of work carried out previously during my nine years of teaching architecture in Nepal, as well as a preparation for returning to that work in the future. The teaching of architecture is a relatively new discipline in the country of Nepal with a Bachelor of Architecture program only beginning in 1994 at the government sponsored Pulchowk Engineering Campus of Tribhuvan University in Kathmandu. I taught in this program from the early years of its implementation and also helped to begin the first architecture program at a private engineering college in the country beginning in 1996. The faculty for both of these programs was drawn almost entirely from local architectural and teaching talent within Nepal though there had been some international input and financial assistance, and a few Indian professors were hired to provide some senior faculty to both the government and this private college faculties.

Beginning only recently, and having both international and local architectural expertise, it is interesting to investigate how effectively these architecture programs have trained and prepared students to participate in the profession of architecture in the country of Nepal and also abroad, where many have gone for work and for further studies. The purpose of this research investigation is to determine how effectively this architecture

education has been designed and implemented in Nepal, particularly in the Architecture Department of Nepal Engineering College (nec).¹

The method for investigating the efficacy of the architectural training in Nepal was primarily to interview graduates of the architecture program to determine their perception of their academic and professional competency in retrospect having completed their years of architecture studies. A small number of the employers and graduate level teachers of these graduates were also interviewed to provide another perspective on the perceived competence of graduates of the architecture program in both professional work and advanced academic environments.

Background of the Problem

Educators in Nepal have historically been weak in the area of assessment. There are several examples of research and evaluations completed by foreigners and by Nepalis in other academic disciplines, especially social sciences and anthropology (Onta, 2004). However, there have been no published reports of evaluations conducted among graduates or any complete academic evaluations from any engineering program in the history of Nepal.² Architecture is a new academic program, but civil engineering has been oper-

¹ Nepal Engineering College uses the lower case (nec) in abbreviating the name of their college and this rather unusual format will be used throughout this dissertation.

² Extensive research of literary sources and interviews of prominent architecture and engineering educators in Nepal resulted in this conclusion. A couple of architecture curriculum evaluations were carried out (one coordinated by the Canadian International Development Agency [CIDA] the other by a Pulchowk Campus Architecture student for the student run magazine. Both of these evaluations only reviewed the curriculum). This information was verified by Dr. Sudarshan Raj Tiwari and Dr. Jibaraj Pokhrel of the Department of Architecture, Institute of Engineering, Pulchowk Campus.

ating as a full bachelor degree program for decades and other engineering courses (mechanical engineering, electrical engineering, electronics engineering, etc.) have been running for more than 30 years. Though the architecture programs are rather recent, the much longer history of several engineering education programs is sufficient to expect some significant evaluations to have been completed. In the presence of this dearth of evaluative examples, it is not surprising that an assessment of the effectiveness of more recent architecture programs have not been done in Nepal. The absence of past assessment however, does not remove the need for such an assessment at this time.

At least one reason for the importance of program evaluation for the architecture programs in Nepal can be seen in the rapid pace of technological change. This can clearly be seen in the greatly increased use of computers in architecture in Nepal. When the architecture program in Nepal was first developed, computer use in architecture was in its early stages in the West and had not even begun in South Asia. In the 1980's the cost of one computer adequate to use in architecture design was more than twenty years wages of the person who would be using that computer.³ Note that this calculation does not even consider the cost of sophisticated CAD⁴ software needed to use the computer for architectural drawing. In this environment, it is understandable that there was no thought of

³ In 1985 a well-trained Architectural Draftsman made NRs (Nepali Rupees) 400/= per month (@ then current exchange rate of 33:1 this would be equivalent to US \$12.12/month in 1985 dollars). A suitable personal size computer capable of running drafting software was \$3,000.00 in 1985. To purchase this type of computer at \$12.12 per month would take more than 247 months (more than 20 years) not including duty of more than 100% that would be charged to bring a computer into Nepal for business reasons in 1985 (including duty more than 40 years to pay for a computer; a lifetime pay for a draftsman).

⁴ CAD—Computer Aided Design (Sometimes CADD---Computer Aided Design and Drafting)

the use of computers in architecture offices in South Asia. Thus, computer applications were not part of the architecture curriculum as it was developed for Nepal in the early 1990's. Through the 1990's the cost of computers dropped considerably and also programs usable for architecture multiplied and dropped in price. In the first few years of the professional architecture program in Nepal it was evident that students needed to be exposed to computers in architecture and updates were made in the curriculum as computers were acquired by the colleges. The input of computer training in architecture programs is one area in which feedback from the profession was used to initiate change in curriculum in architecture programs in Nepal. However, in most other areas, there is a strong divide between private practice in offices and the academic ivory towers.

Purpose of the Study

“The pursuit of school effectiveness and education quality is a major concern in current educational reforms in different parts of the world” (Cheng, 2000, p. 207). It is, or should be, a goal of all educational institutions to improve their process and their product; the process of teaching and the product of learners.

“Three purposes appear most frequently in definitions of evaluation: (1) to render judgments on the worth of a program; (2) to assist decision makers responsible for deciding policy; and (3) to serve political function” (Talmage, 1982, p. 594). In the context of this research investigation “political” reasons will be limited to any institution related politics and not national level politics or oversight as there is no national or local “political” oversight of a private college. Certainly it will be important to render a judgment on the worth of the program through the results of this research. However, the most impor-

tant use of the results of this program evaluation will be to provide information to assist decision makers in improving the architecture program and pedagogy in Nepal. This research can be categorized as summative evaluation because it will focus on program improvement (Fitzpatrick, 2004) and be “evaluation done for, or by ... decision makers who need evaluative conclusions” (Scriven, 1991, p. 20).

The initial reason for this research direction is to determine areas of strength and weakness in architecture education in Nepal for the evaluation of past teaching and architectural education administration decisions. The results of interviewing graduates and their employers should highlight strengths and weaknesses of past architecture education programs, curricula and pedagogy.

An additional purpose for undertaking this research is to learn an investigative and analytical technique that can be used for future evaluations as well. Because this evaluation will take place in multiple cross-cultural contexts, the process will need to be adjusted to adapt to various cultural realities. That means that I, and others in academia, should learn valuable lessons that will enable me to provide a structure and formwork for the evaluation of other academic programs in other geographic and cultural locations and thus be able to serve a much broader clientele in educational evaluation.

The architectural education process under investigation and the research methodology will involve multiple cross-cultural aspects. As a foreign teacher in Nepal, I was immersed in a significant cross-cultural situation myself in understanding the culture and lifestyle of the students. The students themselves were involved in a cross-cultural learning situation in that the language of instruction and the books were in English, which is a second or third language for the students. Upon graduation a number of the students

moved to other countries for further education or work and thus were immersed in a culture different than their home country and in work experiences that were foreign to them. This research itself is cross-cultural as I, as an American, interview and analyze Nepali architecture graduates. This dissertation seeks to evaluate Nepal architecture graduates in two different countries and thus is a multiple cross-cultural experience in understanding the educational process and the responses of the students.

Statement of the Problem

A major problem facing architectural education institutions in Nepal is the lack of evaluative feedback that measures educational effectiveness. This shortcoming is a result of lack of finances, lack of qualified personnel and appears to be also a lack of vision for the need and usefulness of evaluation. There is not a climate of evaluative thinking, and few, if any, course evaluations are ever made by individual teachers or educational institutions in the country. Nor are students afforded any opportunity to evaluate teachers or courses. This lack of evaluation can lead to a situation where courses can become outdated, irrelevant and ineffective. For example, with the long lead time involved in a five year architecture curriculum plus a period of time before graduates realize their education has been ineffective added to the time it takes for information to filter back to prospective students, a whole generation of architecture students could have been ineffectively trained for their chosen profession. Certainly, educational evaluation is something that should be done on a continuous basis. However, since it has not been done in any systematic way in Nepal and architecture education is relatively new to the country, it is an excellent time to investigate how these architecture programs are doing preparing stu-

dents for the realities they face in postgraduate education and in private architecture practice. The research question for this investigation can be stated distinctly as follows:

How effective was the Nepal Engineering College Architecture Department in preparing graduates for the profession and further academic training during the first ten years of its existence?

The answer to this question leads to the application of the research question, which is:

What changes need to be made to the teaching of architecture at Nepal Engineering College to maximize the professional and academic competence of its graduates?

This dissertation research seeks to answer the first question through the interview and analysis process of this dissertation. The second question will be answered as the findings of this research are practically applied to the Nepal Engineering College situation.

Impossibility of Impartiality: Personal Predisposition in this Study

Undertaking an investigation of a field, in which I have been personally involved for over a decade, has its complications. Because of my own experience and personal bias, it is possible that I could look at the development of the research process, the qualitative interviews and the analysis of the data with less than impartial eyes. As stated by one researcher, “from the research focus to the research questions, to the research design and methodology, to the theoretical orientation, and to data interpretation, research is riddled with subjectivity. Researchers come to their work, as do other professionals, with

beliefs and attitudes that affect their work” (Ford, 2008, p. 83). It is not that author bias is removed, but that my personal orientation and bias is understood and included as part of the documentation process. Indeed, as researcher Donna Ford continues, “One of the contributions of qualitative research is the attention devoted to the realities and effects of researcher biases” (2008, p. 86).

It is unlikely that I would be undertaking this project if it were not for the years of involvement, and I must say joy, in participating in the preparation of students in Nepal for the profession of architecture. With this history of involvement comes a potential for bias, but also with this background comes a deeper understanding of the situation than could have been gained from solely an academic investigation of the facts as only a partially interested outsider. Having grown up in America, but spending the majority of my adult life in Asia, has given me a deeper understanding of the cultural background and circumstances involved in a cross-cultural study of this kind.

Because of my significant involvement in architecture education in its beginning years in Nepal, I also have had interaction with the students, who have studied and graduated from these programs. Indeed, I have taught all of the students in the first few graduating classes of bachelor of architecture degree programs in both the government Pulchowk Campus and the private, Nepal Engineering College located in the small village of Duwakot, Bhaktapur, Nepal just east of Kathmandu. Knowing the students who have graduated in the past, gives me some advantages in undertaking this research. I can approach these students as one who knows them and whom they know has an interest in their welfare and the progress of architecture education in Nepal. There is a tendency in interpersonal relationships in Nepal, especially from a younger to an older person (or one

under authority to the one in authority), to give an expected answer, and not necessarily what would be considered a “true” answer in the West. However, I am aware of this cultural expectation and most of the students I have taught know that I expect the real answer and not the normally expected culturally sensitive vagueness or half-truth. My understanding of the cultural norms and my previously developed relationships with many of the students will provide more advantages than disadvantages in this research process.

As one who was involved in the writing of a new architecture curriculum and the organization of courses and lessons plans in Nepal, it is also possible that I could have a built-in, possibly unnoticed personal attachment to the program and a tendency to perceive any insufficiencies in students as difficulties with the students or individual teachers and not with the “program I have developed”. However, having the awareness of this potential bias will provide some degree of alertness to potential prejudice.

While being close to the graduates of the architecture program who will be interviewed for this research has its advantages, there are also potential liabilities, as I may not look on the alumni with neutral eyes. I could have a tendency to see them the same way I saw them as students with identical abilities and weaknesses; pre-judging them, as it were. This could have consequences in the interviewee selection process, the interview and the analysis processes, if I let my previous opinions of students allow me to judge them in the present.

Cross-Cultural Complications

As a result of the initial analysis, it became obvious that there were significant cultural issues that had not been addressed in this investigation. Several different cross-cultural aspects could be significant:

- 1.) The cross-cultural nature of my teaching as an American teaching in Nepal.
How would this cross-cultural experience influence me and how I taught?
- 2.) The cross-cultural experience for the Nepali students learning from a non-Nepali teacher. How would the students' learning be impacted?
- 3.) The cross-cultural influence on students who graduated from an architecture course in Nepal, taught in the English language as the graduates, and moved to other countries for work and further studies. How would my cross-cultural impact on the students influence them as they moved into cross-cultural living, working and studying situations after graduation?
- 4.) The cross-cultural impact on the research process with me as an American interviewing and trying to analyze student perceptions of Nepali graduates some of whom have stayed in Nepal and others, who have studied and lived in various cultural contexts.

The consideration of these cultural issues became apparent to me and became an important issue as this investigation was under way. How could this research be complete without at least a cursory understanding of the cross-cultural impacts on this investigation and indeed on my own teaching effectiveness and experiences of the graduates? Thus, in

the middle of the research and writing phase a new investigation into cross-cultural issues was initiated.

Most of this research is not about me as an individual teacher, but about the effectiveness of the architecture teaching at Nepal Engineering College, of which I was just one teaching member. However, this cross-cultural topic has more to do with me individually, since I was the only long-term faculty member from outside the Indian subcontinent.⁵ One important aspect is to understand how cross-cultural issues may have affected this particular research process, but another reason is to see the cross-cultural impact of my presence at nec and how that might have influenced the students, especially since so many of the graduates have traveled, studied and worked outside of Nepal since graduation.⁶

This dissertation topic is not cross-cultural research per se. “The term ‘cross-cultural’ implies comparison, juxtaposition, and differentiation. Cross-cultural research contrasts two or more distinctive cultural groups in terms of some quality, value, belief, or behavior” (Jameson, 1994, p.39). This research is primarily a program evaluation, but there is a cross-cultural aspect because I, as an American, am evaluating a program in Nepal and interviewing alumni, who are all of Nepali cultural origin.

⁵ During my six years of teaching at Nepal Engineering College we had one young teacher from the United States (from Korean cultural heritage) teach for one semester and one senior architect from America (from Indian heritage) teach for one or two months. However I was the main cross-cultural faculty member for the students.

⁶ From discussions and interaction with the students, 40 students from the three batches interviewed (95 students total) have studied or worked outside of the Indian subcontinent since graduation; 42%.

One of the first impacts of cross-cultural aspects on this dissertation was in the decision process of the research topic: setting up of the objectives and aims of the research, deciding on the research methodology, the data analysis, and, actually in every aspect of this dissertation process. Other researchers have noted, “Numerous scholars of all racial, cultural, and linguistic backgrounds have suggested that research is not an objective, neutral science: that all aspects of research are influenced by researchers’ experiences and beliefs” (Ford, 2008, p. 83). Through the text of this dissertation, I need to communicate my epistemological position and not simply the findings that have resulted from research conducted from that position. For, where I began epistemologically influenced how I got where I am, and thus will impact where I finally arrive.

The benefit of cross-cultural research to adult education is significant. “Cross cultural research opens the field up to accepting and instituting inclusive educational practices. As a plural, multiracial, multiclass society there are few educational materials which deal with how to teach in a multicultural context” (Sparks, 2002, p. 128). Observations from cross-cultural insights from this research can be important to adult educators here in America as well as in other countries where cross-cultural educational environments exist.

The cross-cultural issues of this research can be significant in extending understanding of cross-cultural issues and methodologies in the academic arena. It has been said, “In an increasingly interdependent world the demands for cross-cultural training are growing” (Triandis, 1984, p. 1013). There is need for greater academic awareness and understanding of cross-cultural issues that this research project can help address. And even more, “the multiethnic composition of the global neighborhood would suggest that

(we) re-consider the theoretical limitations of Western research paradigms and question how research might be facilitated, conducted and reported in a way that accounts for diversity” (Fitzgerald, 2005, p. 19). As adult educator Barbara Sparks related: “We must confront our own theoretical, personal, and professional biases and begin to move beyond them” (2002, p. 127).

Most existing cross-cultural research includes business, academic exchanges, tourist contacts, military and State Department dealings, and more recently cases of refugees and immigration. Of these various connections, tertiary level academic cross-cultural interactions are a small segment of the research. Cross-cultural program evaluation is also a very small segment of existing research (Jameson, 1994). “The benefits of cross-cultural research lie largely in better theory development and better conceptualization of important variables. The difficulties are largely based on added methodological burdens” (Triandis, 1984, p. 1007). Even at the later stage on incorporation of cross-cultural issues, it has been important to the research process and outcomes. The additional methodological complications will be discussed in Chapter 3.

Usually one of the major problems for cross-cultural researchers — conducting research outside their own familiar cultural confines (Triandis, 1984, p. 1007) — was not such a problem in my case because I was a long-time resident in South Asia and very familiar living and working in Nepal. However, as has been noted: “Crossing borders (cultural, political, and structural) generates physical, psychological, sexual, and spiritual tensions that, over time, may become ‘familiar—never comfortable’” (Sparks, 2002, p. 122).

Significance of the Study

This study will certainly be of foundational significance and importance to the architectural education establishment in Nepal, for which it is targeted. A comprehensive investigation and evaluation of the efficacy of architecture education in Nepal can be of positive value aiding in evaluation of past performance, also in serving as a guideline for future program evaluations and also academic changes that need to be made. It is likely that this study can also serve as a model in program evaluation in several cultural contexts and among various academic disciplines.

Program evaluation is a much more regular occurrence at educational institutions here in the United States. The guidelines of Southwestern Baptist University in Missouri state: “Alumni will be surveyed every two to five years, depending upon the needs of the major field” (SBU, 2009, p. 1). Besides other course and program evaluations taking place, the university guidelines for SBU recommend surveying the alumni on a very regular basis. The research for this dissertation represents a “first of its kind” program evaluation for an engineering related program in Nepal. It will hopefully be a groundbreaking, but also pace setting example for other educational institutions in the country. Consistencies between architecture program evaluations in Nepal and America could be interesting for educators both in the United States and in Nepal. Similarities between America and Nepal can be useful for architecture educators in Nepal to know how their program compares to architecture education in America and how to better prepare their students for advanced studies abroad. These findings can also be beneficial for architecture educators in America as they are involved in evaluating applications for admission to

a Master's of Architecture program from graduates of a Bachelor of Architecture program in Nepal.

Cross-cultural research examines business, academic exchanges, tourist contacts, military and State Department dealings, and more recently cases of refugees and immigration. Of these various connections, tertiary level academic cross-cultural interactions are a small segment of the research. Cross-cultural program evaluation is a very small segment of existing research (Jameson, 1994). Thus, the cross-cultural aspects of this research will be especially beneficial to the academic community particularly as it pertains to program evaluation.

Operational Definitions and Terminology

Competence—the quality of being competent; adequacy; possession of required skill, knowledge, qualification, or capacity; sufficiency (derived from Dictionary.com, 2006).

Cross-Cultural— “The term *cross-cultural* implies comparison, juxtaposition, and differentiation. Cross-cultural research contrasts two or more distinctive cultural groups in terms of some quality value, belief, or behavior” (Jameson, 1994, p. 39).

Educational Competency—“Education Competency represents many of the attributes, behaviors, areas of knowledge, skills, and abilities required for successful job performance” (Microsoft, 2006, p. 1). Education Competency entails developing students to a level of proficiency in the areas of individual excellence, operating skills, strategic skills, courage, organizational skills, and results. Detailed “levels

of proficiency” have not been determined in either the academic or professional field of architecture in South Asia. This is an area for further investigation.

Educational Proficiency—involves the knowledge, skill and disposition in a reflective professionalism and the ability to enable all students to learn in a creative, caring, learning environment (derived from Dictionary.com, 2006).

nec—Nepal Engineering College is frequently referred to by its initials, nec, in the lower case. To be consistent with usage in the college itself this abbreviation will frequently be used in this document.

Perception—the immediate or intuitive recognition or appreciation through a person’s own way of conceiving something. Thus perception is individual and intuitive and contains an individual’s own thoughts and ideas. Perception can be a perceived truth though possibly not an actual truth (derived from Dictionary.com, 2006).

South Asia—the term “South Asia” may not be understood by all readers. This refers to the geographic area of southern Asia including the Indian subcontinent and comprising the countries of Bangladesh, Bhutan, India, Nepal, Pakistan, Sri Lanka and the islands of the Maldives. These countries are now part of the South Asia Association for Regional Cooperation (SAARC).

Limitations of the Study

Of importance in every study is how broad or limited the scope of investigation. In most cases it is found that the broader the study the wider the influence but also possibly the more complicated, less specific and less useful the results. It is proposed to limit this study to an architecture education program and to concentrate on the graduates from

that program. The chosen architecture program is Nepal Engineering College (nec) which was the first of what has become to date four private engineering colleges in the Kathmandu area hosting professional bachelor of architecture degree programs along with the public, government sponsored architecture department on the Institute of Engineering campus in Pulchowk, which is under Tribhuvan University. This private engineering college began in 1993, and the architecture program began in 1996. Ball State University signed a five-year academic memorandum of understanding with Nepal Engineering College in 1999 and thus academic ties between nec and Ball State have developed through exchange of students and teachers. Five nec students came to Ball State on an exchange program for a semester in 2000 and a total of five nec architecture graduates have pursued graduate studies in architecture at Ball State University. On a broader platform, graduates from nec architecture program are now studying or working in Nepal, India, Bangladesh, Singapore, Japan, Hong Kong, Australia, Germany, France, Spain, Holland, Belgium, England, Scotland, Canada and the United States. To understand how well the architecture program has prepared students for their future work and further study in architecture, it is imperative to investigate students in at least a couple of different physical settings.

To have a useful evaluation of the effectiveness of the architecture program in preparing students for the profession of architecture in various locations, it was originally intended to interview graduates of the program in Nepal, graduates who are now studying or working in Nepal, several countries in Europe and in the United States along with the faculty members or architectural professionals who are supervising them. These subjects would provide a cultural cross-section of the places where students have been involved to

determine how successfully students were prepared for the professional and advanced student roles they have undertaken. However, for practical reasons, the geographic range was limited to the United States and Nepal. As the research progressed the focus also became more aimed primarily on the graduates of the architecture program and less on their employers or graduate educators.

CHAPTER 2

Review of Literature and Historical Context

Since it can be difficult to predict what academic literature will be important to investigate prior to qualitative research, the review of literature continued during and after the research process. There were, however, certain known areas that were researched before the interview process was conducted. Since this investigation looks at architecture programs in Nepal and their effectiveness, it was thought important to investigate the curriculum and educational objectives of other architectural educational institutions to determine how the Nepal programs compare to what is considered normative in architectural education circles today.

Of foundational importance in any educational endeavor is the teaching and learning process. A proper educational program evaluation will bring out the effectiveness of teaching and learning in a given context. The efficacy of teaching and learning in any context will be dependent upon the epistemological position of the teachers and how that works out in their teaching, as well as the learning history of the students considering how they have learned in the past and how they might learn better. The learning process in the earlier years of education in Nepal is highly-structured, instructor based, and relies heavily on memorization by the students. The objective of the teacher is to push as much information into the vessel of the student's mind and then see how much the student can remember on a written exam. The higher the grade on the exam, the more "learning" has

taken place. Most educators in Nepal would consider this “filling of empty vessels” as their main goal in education. Though of dubious effectiveness at earlier ages, this philosophy of learning is even less useful (actually more damaging) for the older students learning in a university setting. As stated by one adult educator:

The adult’s mental learning state is not a blank chalkboard on which you, the teacher, can write as you wish. Neither is the adult learner’s head an empty pail for you to fill with your knowledge and ideas. The adult learner’s chalkboard already has many messages on it, and his mental pail is almost full already. Your job as teacher is not to fill a *tabula rasa*, but to help your participants reorganize their own thoughts and skills. A prerequisite to helping adults learn is to understand how they learn (Draves, 1984, p. 7).

Certainly as a poor developing country, the situation in Nepal is not similar to much more wealthy nations or even identical to neighboring India with its huge population and burgeoning economy. However, many of the architecture graduates from Nepal travel to India and abroad for work and further studies so it is relevant to investigate precedents in architecture education in these other countries as well.

It is obvious that a poor country like Nepal is not likely to be able to keep up with curriculum changes in the West related to advanced technology like laser cutting machines, advanced thermal testing equipment, solar simulation labs, etc., but it should be expected for architecture faculty in Nepal to keep abreast of the changing nature of architecture design and building construction to at least be able to inform students of design and building trends around the world.

Research has shown a correlation between an interviewee's current job satisfaction and their evaluation of their educational experience (Delaney, 1997). Interviewing alumni to determine their perception of educational efficacy, it is important to determine a respondent's appraisal of their current job satisfaction as a basis for evaluating their responses concerning their educational experience. Though a single variable for job satisfaction has been criticized because, "Such an approach ignores the complexities... For example, an individual may experience high satisfaction in one dimension of his or her professional life while simultaneously reporting low satisfaction in another dimension" (Anthony, 2002, p. 43). A simpler more general definition of job satisfaction was utilized for this interview process. Since the objective of seeking information on current job satisfaction is only to use as a gauge in considering its impact on a respondent's overall consideration of their educational experience, a simple definition of job satisfaction was utilized: "Job satisfaction indicates how people value the whole package of both monetary and non-monetary returns to their jobs according to their own personal tastes, preferences and expectations" (Mora, 2007, p. 30). Job satisfaction can also impact a person's view of their life satisfaction (Landry, 2000) that can also influence a respondent's perception of their educational experience.

When considering how to evaluate an academic program, there are many options to consider. With the difficulty and expense of evaluations, there must be very good reasons for planning and regularly conducting program evaluations. Rossman and El-Khawas (1987) give three basic reasons for assessment--political, economic, and educational reasons.

In recent years, evaluations in the United States have become mandated by funding agencies and shareholders who want to make sure that success is being achieved. “Assessment underscores the importance of accountability” (Guthrie, 2001, p. 1). The results of student evaluations contribute to judgments about the quality of teaching and decisions about promotion and funding in many institutions, as well as, to improving an individual faculty member’s teaching practice (McCormack, 2003).

Frequent program evaluations are also needed to ensure that students are learning and academic objectives are being accomplished. “Assessment provides responses to two fundamental questions about the educational endeavors at our institutions: ‘What has been accomplished?’ and, ‘How might it be accomplished better?’” (Guthrie, 2001, referencing Manning, 1986). If the decision were left to some faculty, program evaluation might never be carried out. It is too easy for faculty and administrative time to be given over totally considering **what** students should study rather than **how** they could learn better or **whether** they are learning as much as they should (Bok, 1986).

Beyond the superlative goal to see improved teaching and learning, there are many routine reasons that universities carry out academic program evaluations. The University of Texas mentions four specific objectives summarized as follows:

1. Maintain and enhance academic quality
2. Promote efficiency in allocation of resources
3. Support planning and budget process
4. Respond to assessment requirements for accrediting agencies

(Texas, 1997, p. 1).

It is evident that universities have sufficient internal as well as external motivations to be serious about program evaluation and its natural results—improved programs and student learning and the consequential benefits from those outcomes. Because of its importance and the extensive nature of its process, evaluation is an ongoing process here in the United States (Wright, 2004).

Types of Evaluation in Higher Education

Higher education program evaluation is quite an extensive process. The guidelines for evaluation of undergraduate programs at the State University of New York comprise a document that runs sixteen pages. (New York, 2001) In some situations certain evaluation criteria are required by federal, state, registration or accrediting bodies and colleges have continuing evaluations in processes (Texas, 1997).

There are many ways that higher education program evaluation can be carried out. First, in order to evaluate, there must be parameters upon which to base the evaluation. Thus universities typically draft mission statements and institutional outcome statements before embarking on program assessment projects in order to have a benchmark for evaluation. The University of Saskatchewan in Canada has as part of their mission statement: “Our mission is to achieve excellence in scholarly activities of teaching, discovering, preserving and applying knowledge” (Saskatchewan, 1996, p. 1). Their objectives coming from their mission statement provide more specific guidelines that channel their planning but also provide objectives that can be evaluated periodically. They specifically mention that they “must make choices to change, combine, or delete existing programs

and specializations, and to introduce new initiatives” when existing courses or programs are not meeting needs or achieving results (Saskatchewan, 1996, p. 1).

Program evaluations utilize research that is either quantitative or qualitative in nature. Both of these two categories of research have strengths and weaknesses and provide different kinds of information. There are also many different types of both quantitative and qualitative evaluations. Some research is done exclusively for program evaluation. Other examples may be done primarily for other purposes but added to a body of data to consider in the program evaluation process. A few examples of different types of academic program evaluations are considered here:

Examples of evaluative quantitative tests.

There are many types of quantitative evaluations used in higher education program evaluation. These range from nationally coordinated tests to faculty administered tests which may be unique to a department or an individual course. Critical in quantitative research are the development of a reliable survey instrument and/or accurate collection of data to provide a correct starting point for analysis. Good survey instruments must demonstrate validity (the instrument measures the intended outcome) and reliability (the instrument repeatedly produces consistent results) (Apostolou, 1999). When employing existing data (financial records, student grade records, etc.) it is important to have all information correct. When using an interview process, representative sampling is required to achieve accurate results.

A few examples of quantitative testing instruments used in higher education evaluation are explained here:

- ❖ **CSEQ** (College Student Experiences Questionnaire) (Indiana, 2005). 100+ questions—looks at aspects of student life and learning: “assesses the quality of effort students expend in using institutional resources and opportunities provided for their learning and development” (Indiana, 2005).
- ❖ **NSSE** (National Survey of Student Engagement) (Kuh, 2004). “The National Survey of Student Engagement (NSSE) is specifically designed to assess the extent to which students are engaged in empirically derived good educational practices and what they gain from their college experience” (Kuh, 2004, p. 2).
- ❖ **APT** (Academic Profile Test) It covers material usually included in courses taken during the first two years of college — mainly the "core curriculum" or "general education requirements". On this test three skill areas of writing, mathematics and reading/critical thinking are covered. In each skill area the topics of humanities, social sciences and natural sciences are addressed. The test is used by colleges and universities to assess outcomes of their general education programs so that they can improve the quality of instruction and learning (Rolla, 2006).

Examples of evaluative qualitative tests

Besides the more common quantitative program evaluation methods, academic institutions are finding value in conducting qualitative research to aid in their program evaluation.

One advantage of qualitative methodology is that a good researcher can find answers to questions that they might not know to ask. One example to illustrate: an extensive quantitative survey of alumni was conducted at a major northeast US university.

Among the findings were results from four areas:

Satisfaction with courses	3.31
Perceived professional growth	3.96
Preparation for diversity	3.38
Assessment of intellectual challenge	3.07

(Delaney, 1997, p. 255).

All of these were ranked by alumni on a scale of 1-4 (low to high) and the mean results ranged from 3.07 to 3.96 in these four categories. Even with this statistical information, helpful though it is, there are still gaps because specifics are not known of why and how. What areas does the university need to improve in the area of intellectual challenge? Though this can be seen as a weakness for the school, further understanding is missing. It is also difficult in a quantitative study to find something that you do not know to look for. This type of study is good to prove or disprove a hypothesis, but not as useful in finding out unknown concepts.

There can be additional difficulties relying solely on quantitative data. The above mentioned study coordinating with other studies also found that “alumni ratings of college were related to employment satisfaction” (Delaney, 1997, p. 257). Thus an accurate evaluation of alumni college experience was difficult to obtain from just a quantitative questionnaire.

Qualitative research has its own limitations as well. Though very specific and relevant information may be gathered, because this type of research is conducted from such a small sample, the findings can rarely be generalized to a larger population.

Some examples of these qualitative tests used in higher education evaluation are given here:

❖ **WPE** (Writing Proficiency Exam) The writing proficiency exam is a written paper that is used by various universities in very different contexts and for various reasons. Some colleges use the WPE for pre-determining a student's writing ability to evaluate what type of English class would be most appropriate for them. Others use the exam as a means of testing out of general university writing requirements. Universities will sometimes use the WPE as a means of summative evaluation of student performance and learning. Still others will utilize the exam as a means of program evaluation by compiling the results of many students writing exams. Different universities use different time duration for the test and require different document length. (Calpoly, 2006; Cal, 2007) There is also variation in how the essays are graded. The following are guidelines are given for the grading of writing proficiency exam at California State University Los Angeles:

Each essay is graded independently by two readers. Readers evaluate the essay in terms of:

- How well it completes the tasks set by the topic
- The effectiveness of its organization and development
- It's demonstrated language control
- Each reader assigns the essay a score from 0 (very low) to 6 (very high).
- These scores are added together, so the highest possible score is 12 and the lowest is 0.
- To pass the exam students must achieve a score of 8 or higher. (Cal 2007)

With the great variation in the format, use, grading and evaluation of the Writing Proficiency Exam, it is easy to see that this cannot be utilized directly as a comparative instrument between various universities. However, properly designed and evaluated, the WPE can be used within a university for some student evaluation and possibly course evaluation. The subjective nature of the test makes exact comparisons difficult, but general guidelines can be rather accurately revealed. The initial evaluation of the WPE is a qualitative assessment, but with the numeric grading used by many universities, the wider evaluative use of the exam can be done in a quantitative manner.

❖ Portfolio Assessment. Some colleges and universities are using the final student portfolio as a means of evaluating overall student performance and assessing student learning. This type of portfolio has been utilized in the Architecture Department of the College of Architecture and Planning at Ball State University at various times as a means of evaluating student qualifications for continuing in the program, for evaluating final student competency, and as a means for helping students to prepare a personal portfolio for applying for job positions after graduation. The student portfolio is presently part of the evaluation process in admitting new students to the First Degree Master of Architecture program at CAP. It is hoped that these portfolios will highlight student progress and learning and are frequently used in comparing one student's potential with another. Portfolios themselves are frequently more useful in assessing individual students than a college academic program. Taken collectively with a considerable amount of review and analysis, portfolios can be used to help in program evaluation. This is a qualitative review process and there are frequently not means of numerically grading portfolios because of the subjective nature of evaluating their content and presentation technique. Portfolio

evaluation would not be applicable at this time to evaluate architecture programs in Nepal because student portfolios are not a common requirement in any architecture program in Nepal up to this point.⁷

❖ Survey of Student, Alumni or Faculty Perceptions. Just as there are quantitative surveys of students, graduates and faculty by various universities, sometimes qualitative studies are also conducted. Qualitative studies are much less frequent because of the lack of qualified research personnel, especially inside different individual departments to help to interview and analyze data gathered from specific departmental disciplines. These types of qualitative evaluations of students, alumni and their employers could be useful in doing program evaluation and could also be helpful in searching for areas of strength or weakness that can be further quantified and analyzed in quantitative studies. This method has great potential for program evaluation but has been infrequently used and is not fully understood by many academicians. One higher education researcher summarizes the difference between quantitative and qualitative interview methods by saying, “While quantitative methods can effectively identify broad trends and common associations, in many cases qualitative methods are more suited for in-depth and detailed analysis of contextual elements” (Tsui, 2000, p. 438). The goals for this dissertation seem best fulfilled by utilizing a qualitative research methodology.

⁷ Information gathered from interviews of heads of architecture departments and architecture teachers from all of the architecture degree programs in Nepal.

Program Evaluation Usefulness in Higher Education

“The higher education assessment movement is a young and rapidly evolving phenomenon” (Wright, 2004, p. 1). In the journey of higher education, program assessment is an important means of finding out where we are and can help in the process of figuring out where we should be going. “Assessment can be a positive force in educational reform” (Lipschultz, 1999, p. 78). If changes need to be made, proper program evaluation can provide needed evidence to help make those corrections.

All teachers who have been around for a long time in education have known students who do well on exams, but do not really learn the information or demonstrate they are able to utilize knowledge from their academic training in their professional jobs. This is the same with program evaluation. We can evaluate student learning course by course; but that does not give us a good understanding of what the student has really learned. Nor does evaluating students course by course give us a good picture of the overall learning process or of strengths and weaknesses in the program.

“Acceptance of assessment as first and foremost a tool for improvement, a focus on student learning, the development of alternative methods, and a determination to act on findings—all have made assessment increasingly useful” (Wright, 2004, p. 1). Evaluation and assessment are extremely important for educational institutions. Many large universities have full-time personnel devoted exclusively to the task of coordinating and monitoring evaluation programs. There are many different types of evaluations that are done by universities to work toward the goal of improving student learning, faculty teaching and administrative efficiency. These evaluations may be used internally in the university for program evaluation, promotion and tenure of faculty, administrative review, as

well as, for initiating changes to improve teaching and learning. Some evaluations may be used outside the university for justifying financial efficiency, promoting the university, and for comparison to other educational institutions.

As a general rule quantitative evaluations are made with larger groups, involve statistical analysis and are most useful in quantifying answers to specific questions. For example, a survey of graduates can determine the number of students employed in jobs relating to their major and the average time it took to find those jobs.

Qualitative evaluations are more subjective and allow university officials to find out types of information they would not be able to find out using quantitative measures. If a department is trying to find out areas of weakness in their program, for example, qualitative research methods would enable researchers to ask the general open-ended type of questions that would lead to discussion addressing specific points that would not be asked in a quantitative questionnaire.

Certainly the process of evaluation is as important as the product if evaluation is to contribute to the transformation of a learning institution. “Experience has shown the limitations of traditional surveys and testing, and demonstrated the benefits of more local, more authentic alternative methods” (Wright, 2004, p. 1). As academic program evaluations continue, universities should increasingly look for better evaluation methodology and keep informed of progress in education assessment research.

Architecture Pedagogy

Architectural educator Peter Brown is among those who say that American higher education lacks vision as it follows and reacts to social change rather than showing intellectual leadership in paving the way for the future (2004). “The university exists not just to apply knowledge in order to satisfy human desires but to advance knowledge and refine the ends of knowledge: ‘What can we know?’ and ‘Why should we know it?’ Issues of epistemology and ethics should permeate a university education at every level” (Brown, 2004, p. 285). The university education in general and architecture education specifically are facing a crisis of existence with ever increasing costs in a shrinking economy tests its resilience and significance in society. “Debates on higher education assert that a university mission should foster a campus environment that nurtures exploration, enlightenment and critical thinking among all students” (Salama, 2005, p. 1). In the context of this overall university debate on higher education, architecture faculty have the opportunity to evaluate and strengthen architecture programs to improve the quality of architecture education.

The teaching of architecture, at least in the eyes of many architecture faculty, is very different than many other university academic programs. Architecture education focuses on the development of creative capabilities in addition to a professional knowledge base. As professionals, the primary concern of architects is to produce three-dimensional spaces and forms to accommodate human activity. To teach this skill the concentration of architecture education is focused in the studio where the solving of practical design problems through building designs is the primary means of instruction. Architecture education also attempts to transmit the ethics and responsibilities of its

profession. “Like other types of education, architectural education conveys, conserves, and transmits the values of the profession and society at large” (Salama, 2005, p. 1). The studio provides a place to practically apply what is learned in theory classes as well as to learn the rudimentary design and presentation skills that are used in professional offices.

The topic of architecture is vast and “some would argue that architecture is not a discipline but a set of disciplines” (Piotrowski & Robinson, 2001, p. 82). Because of the volume of information to be learned and the number of practical skills to be developed, most all architecture schools have academic programs longer than other disciplines; frequently five to six years in length.

History of architecture education.

The history of the training of architects goes back to the medieval model of the craft tradition and master mason with his apprentices (Canadian, 2009). The famous Renaissance architect Alberti gives voice to the then emerging concept of the “architect” when he states:

Him I consider the architect, who by sure and wonderful reason and method, knows both how to devise through his own mind and energy, and to realize by construction, whatever can be most beautifully fitted out for the noble needs of man. (Habraken, 2003, p. 33)

The “education” of the architect remained primarily an apprenticeship paradigm into the twentieth century though the organization of actual schools of architecture in America was beginning in the late nineteenth century. Even the famed architect Frank

Lloyd Wright was trained almost exclusively through apprenticeship experience. As the apprenticeship model was primarily a “learning by doing” experience, the early architecture education models followed this trend. In education some have credited the idea of “learning through practice” to Jean-Jacque Rousseau in the 18th century (Mehran, 2006). The earliest academy for officially training artists was in Florence, Italy: the Accademia del Disegno founded by Giorgio Vasari in 1562 (Deupi, 2004). The learning by doing model was exemplified in the influential Ecole des Beaux-Arts school in Paris which began under Louis XIV in 1671 where students were grouped under Ateliers (or patron designers) who guided their studies (Salama, 2005). Though containing a great deal of learning by doing, students at the Ecole also spent hours drawing large copies of decorative classical architectural elements and being grounded in historical theory. The new training paradigm of the Bauhaus in Germany in the early part of the 20th century continued the focus on skills development but in the context of a much broader artistic tradition with learning and training in various crafts (sculpture, weaving, graphic design, etc.) along with an architecture education. The pedagogical process at the Bauhaus still centered on developing skills for completing design assignments (Salama, 2005). In the United States the Beaux-Arts model was predominant until the rise of Nazi oppression in Germany brought many of the Bauhaus educators to America like Walter Gropius (Harvard) and Ludwig Mies van der Rohe (Illinois Institute of Technology, Chicago). These European masters of the Modern Architecture tradition were to significantly alter the form of architecture education in America.

Through all of these educational examples, the studio has been central to the instruction of architecture. In fact, “in most schools of architecture throughout the world,

the studio is central to architectural education” (Bothwell et al., 2004, p. 263) as it is in Nepal also. The studio is an environment of discovery and investigation. Students frequently have one-on-one student/teacher exchange similar to a tutorial known in studio culture as a “crit” or “critique”. “This criticism is a complex form of Socratic questioning and master guiding the apprentice. It is encouragement, nurturing guidance, information gathering and giving practical hints on what to do next” (Hurt, 2004, p. 265). The architecture studio is an example of Problem Based Learning (PBL) which has been called, “the most significant innovation in education for the professions for many years” (Boud & Geletti, 1998, p. 1). “The principal idea behind problem-based learning is... that the starting point for learning should be a problem, a query or a puzzle that the learner wishes to solve” (Boud, 1985, p. 13).

Changing profession represents changing realities.

The speed of change in the world has greatly impacted the profession of architecture. Rapid changes in societies have brought about housing problems and squatter settlements, deterioration of legacy buildings, increasing number and size of large structures and many new building types (Salama, 2005). The large, frequently isolated, buildings have lost a human scale as architects build for clients or image but not for people. Lost is the sense of place and essence that was part of urban spaces in the past. “Quality architecture has virtually disappeared, as have charming streets and walking as a mode of transportation... The dominant trend in both cities and suburbs have been toward large blocks, wide roads, and streetscapes dominated by parking lots” (Steuteville, 2004, p. 293). In a way “architecture has lost the language of placemaking” (p. 294). In the midst of this

crisis of rapid change the profession of “architecture no longer has a clear philosophical vision of its productive social purposes” (Brown, 2004, p. 287).

For many years architecture educators have struggled with how to improve the architecture education process. Even though striving to look to the future, Architecture Education, like its profession, is immersed in an overly strong pull of the past. In this Post Modern era, the Modern era still maintains an influence. Steven Hurtt lists Seven Myths of Modern Architecture that carry over in the thinking of architecture educators:

1. The Myth of the Tabula Rasa (blank slate): that an architect is creating a new building without consideration of the existing traditional architectural typologies and without considering conditions of urban environment or culture.
2. The Myth of Originality: emphasizes the individual over society and creativity over competence lessening the influence of history, culture and society.
3. The Myth that Modern Architecture is not a Style: previously cultural based styles were commonplace, but modernist architects wrongly labeled theirs a universal architecture principles appropriate for all peoples.
4. The Myth that universal Principles are Sufficient for Design: Modern architectural education rejected the study of styles and meanings linked to culture and had no appropriate paradigm to include historic architecture.
5. The Myth that Architecture is Apolitical: because they considered their style universal, their belief was that their style was inherently apolitical even while it carried its own limited political agenda.
6. The Myth that Architecture is an Autonomous Art: considering their Modern architecture sufficient by itself they rejected inclusion of other art forms.

7. The Myth that Architecture is not Urban Design: with each architectural piece being designed unto itself the urban fabric was not considered and most Modern architects preferred isolated sites without significant surrounding context.

These prevailing myths from the Modern era have hindered architectural educators from adapting to the societal and cultural changes impacting the profession. Indeed, today architects are finding that they are to a greater degree building for humanity and not just for the elite. Issues of poverty, social injustice, and energy shortages bring a heightened sense of social awareness in architecture offices. As a result, “architectural pedagogy should be viewed as training toward the manifestation of the ability to conceptualize, coordinate, and execute the idea of building rooted in humane tradition. This mandates a comprehensive understanding of two different but related types of pedagogies in architecture: skill-based and knowledge-based” (Salama, 2005, p. 1). Most architecture schools have focused primarily either on skill-based or knowledge-based instruction through there is obviously a need for both. This has resulted in schools that are either primarily artistic focused or engineering focused. This is many times evident by how the architecture schools are situated on a college campus. Sometimes an architecture school is part of the engineering faculty and other times it is related with fine arts. Whatever the epistemological position of the architecture school, there is a vast amount of professional knowledge and skill required in the training of a future architect. The multiple “personal, technical, legal, environmental issues and at the same time historical, aesthetic, and creative considerations...makes architecture education difficult and controversial. But education of architects must happen even though there is not a standard approach for architectural pedagogy that can assure success” (Mehran, 2006, p. 108).

Changing education must match changing profession

The changes in culture, technology and socio-political situations, and the subsequent evolution of architectural design result in necessary changes in architecture education. One major difference in recent years is the type of clients and buildings that architects are becoming involved with. The respected architecture educator John Habraken notes, “we come from a tradition of monument builders, but today we are almost entirely immersed in design for everyday environments” (2003, p. 32). This concentration on the commonplace does pose a contradiction as Habraken explains, “one cannot claim at the same time that the entire built environment is to be architecture and that architecture is special and different” (2003, p. 35). For architects, the common may not be seen as special, but they do want to make it of high quality. There are numerous examples of fine urban environments from the past that illustrate that an entire environment can be done well and provide a place of beauty for the public. Kathmandu, Nepal itself has numerous fine examples of historic urban spaces with many included on the UNESCO list of World Heritage Sites. Building new constructions in the midst of existing historic buildings increases the design complexity. The multiplicity of restrictions placed on architecture professionals designing buildings in cramped urban environments does not necessarily mean a limitation on creativity. In fact, “truly creative talent is stimulated by constraints” (Habraken, 2003, p. 39) and it is even more important for architecture education to stimulate the creative mind.

The body of knowledge needed to practice architecture is extensive and growing exponentially with new technology, building types, as well as legal, environmental and social parameters. “The wide spectrum makes the education of architecture very chal-

lenging, if not impossible, to engage and validate all the related knowledge in an educational program” (Mehran, 2006, p. 109). The broad areas of specialty related to architecture naturally promote specialization that then necessitates distribution of design responsibilities and a collaborative working style. Architecture schools are finding they need to encourage student collaborative learning to prepare graduates to integrate well into the current cooperative work environment. “The tool of cooperation is method, it comes to the fore wherever we seek to work together. Method is no more or less than a generally accepted way of working” (Habraken, 2003, p. 39).

For hundreds of years, hand-drawings were the principle means of architects creating and documenting their building ideas. The last forty years has brought the computer with its capability of speeding up the presentation process, but also of drastically altering the design thinking process. When any new technology is introduced into a practice, a “dysfunctional relationship can develop between the tools and a task” (Chastain, Kalay & Peri, 1999, p. 6). Drawing is “the principle locus of conjecture in architecture and much of the development of western architecture has been predicated upon techniques of graphic projection” (Evans, 1995, p. 20). In one manner of speaking, “architects do not make buildings. Architects make drawings of buildings” (Brown, 2006, p. 61). Because of the significant influence of the computer on the design process and even the design thinking of the architect, it is vital that architecture educators get a handle on new concepts of teaching architecture design. Some have called this “nether land” area the “third approach between analog nostalgia and digital revolution.” In this situation “computers are used in ways that mirror analog work except that they are used after and not during

the design process” (Neiman & Bermudez, 1997, p. 132), as they try to utilize electronic media within the existing analog framework of the traditional architecture profession.

Digital media has brought a change to architecture education that is not yet understood. Though not seen at first, the “most significant impacts of digital media have been on the cognitive side of the design process” (Brown, 2006, p. 60). When a designer uses a pencil, the design decisions are to a degree influenced by medium of presentation. When a straight edge and T-square is used building designs can tend to become rectilinear compared to more free-flowing designs when using just free-hand pencil technique. In a similar way designers begin to think differently and thus create differently when using the computer software for design development. Most educators have considered computer drafting as simply a tool for presentation and documentation. “It should be troubling that most architects and theorists have been uncritical of the effects that software applications have on design cognition” (Brown, 2006, p. 77). “The present and widening schism between analog and digital design practices should be considered one of the top problems to be addressed in architectural pedagogy at the beginning of the 21st century” (Brown, 2006, p. 60).

Recent trends / controversies.

Learning to design at the complex level of building design is difficult. It is understandable that there is disagreement among educators on how architectural principles are to be delivered. Architectural educators are in disagreement over two very different conceptions of architectural knowledge: 1.) the intellectual or explicit knowledge given primarily in academia and 2.) the knowing embedded in the process of making architecture,

or the tacit knowledge that is essential to design (Piotrowski & Robinson, 2001). A common phrase among some architecture educators is that architecture design cannot be “taught” but only “caught” as a student eventually assimilates a design understanding by continual exposure and practice. The giving of knowledge is easy to understand in the traditional banking system of education (whether or not that is a good educational pedagogy) but making sure that the students understand and can utilize that knowledge in a practical way is a more complex step.

The complexity and specialization in architecture means that more projects are being completed with a collaborative effort. Because of the increasingly collaborative nature of the profession, some architecture educators feel that drastically different methodology in place of the design studio will be needed to teach students how to design in the coming years. Even the respected John Habraken insists that because of the need for collaborative learning the, “studio can no longer be the only format for teaching design. Other ways must be invented.” (2003, p. 40). However, some design schools are preparing students for the collaborative nature of the professional in the design studio by having them work in groups on design projects. There are even examples of group design studios conducted at a distance with students from several colleges which forces students to collaborate in the production of a design assignment similar to a working situation they will face after graduation (Saji, Matsumoto, Naka & Yamaguchi, 2006).

Other areas of recent academic focus include environment-behavior studies and also sustainability and environmental consciousness (Salama, 2005). There are many variations in architecture curriculum with many experimental and model programs. The different model programs seem to be heading in different directions as they explore new

media, new methodologies, and new pedagogies. But there are some underlying similarities between the various cutting edge architecture education programs.

A process of research and discovery is what the model programs have in common. Invention and creativity grow from this process, not the other way around. The schools recognize the wisdom of traditional forms, and view invention for its own sake as pointless. The schools also place a very high emphasis on placemaking, i.e. the building in context. (Steuteville, 2004, p. 299)

In The Boyer report, *Building Community: A New Future for Architecture Education and Practice*, there is a suggestion that “an enriched mission” is the key to a revitalization of the profession and architecture education. The report suggests four purposes to support a new vision:

1. Building to beautify
2. Building for human needs
3. Building for urban spaces
4. Preserving the planet (Brown, 2004, p. 290).

These goals impacting at the personal to the global level demonstrate a wide range of architectural influence and opportunity for professional satisfaction at both individual and corporate level. In the midst of lack of vision and purposeful direction, directive goals can become an impetus for a renewed vision and purpose for the architectural establishment as well as for architecture education. Though floundering around with a lack of direction and purpose for many years, architecture education in America may again find a clearer vision for leadership and involvement in the global society as it prepares professionals to participate in creating a better tomorrow. This may be the kind of

vision that can help provide what Peter Brown called the lack of vision in higher education in general and architecture education in particular (2004) and promote a new sense of intellectual leadership to pave the way for the future.

Cross-Cultural Considerations

This research is not focused on a cultural analysis of Nepal or the specific cultural implications in the curriculum or teaching at Nepal Engineering College. However, there are cross-cultural aspects to this research because I am an American researching in a Nepali situation among graduates of an architecture program in Nepal. This cross-cultural situation does have potential complications. “Doing cross cultural research in adult education is inherently problematic because of the rich diversity of populations engaged in adult practices and programmes” (Sparks, 2002, p. 115).

Using the word “culture” it is probably good to work with a basic definition. “Culture is a system of shared assumptions, beliefs, values and behaviours in a given group, community, or nation” (Cheng, 2000, p. 209). Each individual actually is influenced by a variety of cultural contexts in which they exist. There is the culture of the family, the culture where one works or goes to school, there is the culture of the community in which one lives and works; all which may have many similarities as well as singularities.

Contextual cultures such as classroom culture, school culture, community culture and societal culture are the critical sources of ambient and discretionary stimuli that affect and shape school members’ behaviors and performance. Some of these stimuli can directly affect school members’ behavior and attitudes and some can

shape their values and beliefs and indirectly change their behaviour and attitudes (Cheng, 2000, p. 210).

Part of this research and certainly the application of this research will be to see how changes can be made within the existing contextual school culture of the Architecture Department of Nepal Engineering College that will bring improved learning outcomes. Cultures that influence people are not always large, uniform monolithic blocks. Though there can in some ways be an “American” culture, there are actually several definable cultures within the confines of the United States. “The use of cultural terms at the national or regional level such as ‘Western Culture’, ‘Eastern Culture’, ‘Asian Culture’ and ‘Chinese Culture’ are often very controversial, if not arbitrary and vague” (Cheng, 2000, p. 208). There needs to be care taken in categorizing large geographic or population blocks with a single cultural mantle. This is one of the weaknesses of the frequently referenced Hofstede’s dimensions of cultural variability (Hofstede, 1980; McSweeney, 2002; Sondergaard, 2002; Low & Shi, 2002), which use political boundaries as dividing lines for cultural differentiation. Indeed care must be taken not to over generalize or categorize when using a construct like Hofstede’s dimensions and framework. An Asian researcher, Yin Cheong Cheng asks this same question, “How valid is the application of this framework and its findings to the cultural analysis of educational effectiveness?” (Cheng, 2000, p. 208). Indeed Hofstede never intended his broad based cultural framework to be used on a micro scale because it was developed for macro, national level analyses (Blodgett, 2005). There are cultural aspects to the research being undertaken here which will be investigated to some degree; but a complete cultural investigation into

education in Nepal, and architecture education specifically, remains for a future researcher to investigate.

Frequently it is difficult for researchers working cross-culturally to know the intended meaning of words and actions by those they are interviewing or observing. If an interviewer is not familiar with a cultural norm it is likely they may draw the wrong conclusion. Having spent years in the culture of Nepal I feel I had an advantage in determining isomorphic attributions: “when we interpret the behavior of others in the same way they intended it” (Triandis, 1984, p. 1012). There are several examples from my own cultural learning process, but I will just relate one. The story I will relate is typical of incidents that occurred many times before I learned a certain common Nepali and Indian gesture. Numerous times in my early years in South Asia I would ask a person a question, like asking a taxiwalla (a person who drives a taxi or small three wheeled auto-rickshaw) to take me to a certain location. I could tell that the location was understood by the taxiwalla, but they would shake their head left to right with a little tilt in the gesture as well. Too many times I would become angry at this response because I understood the taxiwalla as indicating that they were not willing to drive me to my desired destination. It was some time before I learned this rocking of the head (mostly left and right) was actually a gesture for affirmative and not negative. These small cultural cues and idiosyncrasies are numerous between cultures as different as the United States and Nepal. I cannot count the number of times during the interview process for this research that the interviewees used this same gesture, now no longer misinterpreted by me.

There are many situations in cross-cultural research where there can be likelihood for errors in judgment on the part of a researcher. It is easy for researchers to make errors

in reading, understanding and recalling the correct meaning of a behavior or even a spoken word during interviews or research observations (Triandis, 1984).

Of particular importance in any research situation, but especially in cross-cultural research, is the power relationship between the interviewer and the interviewee. As clarified by Tanya Fitzgerald, a cross-cultural researcher from New Zealand, “Embedded in any research relationship are the politics of position that create a hierarchical identity between researcher and participant” (Fitzgerald, 2005, p. 17). In any cross-cultural research there are the normal power relationships that are common with any interview situation with the interviewer being the person in authority and the interviewee being subordinate. These power relationships can include male/female, older/younger and even white/non-white dichotomies that can also be different from one culture to another (Fitzgerald, 2003, p. 439). The goal of a researcher is not always to just realize and adapt to cultural norms, but sometimes to “challenge and change them and work toward a ‘cross-cultural competency’” (Banks, 1988, p. 312). This accomplishment on the part of the cross-cultural researcher “has the potential to reduce the power and control differentials between researcher and participant” (Fitzgerald, 2005, p. 18). It was my intent in this research to limit the power and control differentials and certainly to seek to be aware of the effect of their presence. This concern for power relationship is probably even more important in Nepal because of the significant Power-Distance dimension present in the culture (Hofstede, 1980).

With the increasing prevalence of cross-cultural exposure, even within one’s own country, it becomes ever more important for adult educators to gain proficiency in multiple cultural contexts. Indeed, as one cross-cultural researcher summarizes: “The burden is

on all of us, as adult education researchers, to develop the skills and sensibilities needed to cross multiple borders of difference” (Sparks, 2002, p. 127).

Historical Context

To determine how effective the architecture education has been in its context it is imperative to understand the background of this educational endeavor in Nepal, how it began, what formed its direction and structure, and how this initial direction has been followed or adjusted through the years of training architecture students in the country.

The country of Nepal is a beautiful mountain country nestled between India on the south and Chinese controlled Tibet on the north. Nepal is also known as one of the poorest and least developed countries in the world with nearly half of its population living below the poverty line. Approximately 86% of the population live and work in rural areas and over 80% of the population relies on agriculture for their livelihood. The average life expectancy in the country is 58.9 years (WHO, 2003, p. 14). With a per capita annual income of about US \$ 220 Nepal is ranked 77th out of 90 developing countries in the world poverty index of 2001. During the 1990’s a foreign national working in Nepal related to me, that within the Development Community Nepal is referred to as an “undeveloping country” because it was in the process of becoming more undeveloped. “The majority of the population lives in rural areas that are often very difficult to reach, resulting in a lack of basic infrastructure, such as, basic education facilities, transportation, health, clean water, and communication” (Gurung, 2004, p. 13). The literacy rate in Nepal is 45.2% (Men 68%, Women 28%), the world's 15th most illiterate country (Nepal, 2006). On a positive note, the literacy rate has been climbing and the country has seen

increasing school enrolment rates (WHO, 2003, p. 2) though fighting between the Maoist insurgents and government forces has reduced school attendance in recent years.

The government runs some 26,277 schools in the country teaching 6,018,806 students. However, these students come from over 100 language groups and are scattered through thousands of small isolated mountain valleys throughout the country. The average teacher in a government school has 50 students in the classroom and books and teaching amenities are usually non-existent. Even electricity is rare in a rural government school in Nepal (Nepal, 2006).

In the budget year 2006-2007 the Nepal government allocated 26% of their national budget on health, education and drinking water (Pradhan, 2006). This figure of 26% is several times more than the percentage of the American budget for similar infrastructure and support to education. However the 26% is coming from a national budget of only around two billion US dollars. By comparison, the U.S. federal budget for 2006-2007 allocated \$2,029,400,000 just to the state of Indiana for only health, education and environmental related activities⁸ (Bush, 2006). This US government outlay to Indiana for health, education and environment is more than the TOTAL NATIONAL BUDGET for the entire country of Nepal whose population is more than four and a half times the population of Indiana. With these figures as a basis, the lack of financial resources in Nepal comes into clearer perspective.

From a very substandard level at the beginning of the 20th century, education in Nepal has grown explosively in recent years. According to the US CIA Factbook, (2006) on Nepal, “The total number of colleges increased significantly, from 8 in 1958 to 132 in

⁸ Figures from Bush 2006, but calculations by author.

1988 (69 under Tribhuvan University⁹ and 63 private colleges)”. Not only was their growth at the university level, but from 1981 to 2000 the literacy rate in the country jumped from 24% to nearly 42% (still low by international standards) (UNESCO, 2000). The rise in literacy and indeed of all education in Nepal in recent years shows the progress the country is making in development. In this setting it is interesting to note the growth of architecture education in the country as well.

The government sponsored Pulchowk Engineering Campus under Tribhuvan University had been running a certificate level architecture course since the 1960’s. This course was designed to produce architectural draftsman and became an initial course for Nepalis desirous of pursuing a degree in architecture in-country. Though only envisioned as a draftsman’s training program, many graduates went on to work with architects and actually were involved in design, project supervision, site surveys and construction supervision as well as drafting. During the 1980’s the government and Tribhuvan University authorities made the decision to begin a full professional architecture program in Nepal. Because there was no existing architecture course in Nepal, international experts were brought in primarily from Canada, Norway and Switzerland (major financial donor countries in engineering education) to develop the curriculum.¹⁰

⁹ Tribhuvan University is the first and largest government sponsored university named after King Tribhuvan who ushered in the age of modern Nepal in 1951 as he ousted control of the country from the ruling line of Prime Ministers of the Rana family.

¹⁰ A connection with Ball State University is that one of the major educators from Canada involved in the curriculum development process was Prof. Brian Sinclair who later became the Department Chair in Architecture in the College of Architecture and Planning on Ball State University campus from 1998 to 2003.

This new Bachelor of Architecture program was begun at the Institute of Engineering, Pulchowk Engineering Campus in Patan (an integral suburb of Kathmandu) in 1994 in the same department and building that had been hosting the certificate level course in architecture. Many of the teachers for this new program came from the existing teachers in the certificate level course. One Nepali teacher had attained a doctoral degree in a related discipline within Nepal by the time the new course was started and many of the teachers had completed Master of Architecture degrees either in neighboring India, the former Soviet Union or in the West. Soon after the course was started another Nepali teacher returned from England with a doctorate degree in architecture to boost the competency of the faculty. Being the first bachelor of architecture program in Nepal, none of the faculty had completed their architecture degrees in country. This background is to show that 1.) the course curriculum was developed by competent architecture professionals, but without local expertise or experience, and 2.) the faculty, though Nepali, were all trained outside of Nepal. These conditions could lead to a situation where the basic design of the course may not be especially relevant to the students for future work in Nepal because it was done totally by outsiders. Also, because the teachers were primarily Nepali, the students may not be fully prepared for working or studying abroad because of the minimal experience abroad of their faculty.

Of particular importance in this investigation is to determine areas of deficiency in teaching, the curriculum and course content of the architecture program as it now stands. Since the beginning of architecture education in Nepal, many changes have taken place in the field of architecture globally. The use of computers in architecture has already been mentioned. This was particularly difficult to implement in Nepal initially be-

cause of the high cost of investment in hardware, software and faculty education needed to teach these computer methods. There are certainly other areas that were not covered in the original curriculum that may only be covered through personal interest of individual teachers. The area of handicap accessibility has been around in the West for decades and is certainly well established training in architectural educational institutions. However, this area was not listed at all in the original curriculum for architecture in Nepal nor has it had much place in architectural pedagogy up to this time. Because of the very rugged living conditions in the country, those who cannot walk face a very significant mobility handicap, they are rarely seen outside of their homes and few amenities are common for people with physical handicaps. However, in urban areas other infrastructure is becoming more available and architects should be responsible and responsive to this need. The area of sustainability¹¹ is also of vital importance to Nepal. With few natural resources and a rapidly growing population, energy shortages, loss of productive farmland to rapid urbanization, and growing deforestation, the country is heading toward an environmental and social catastrophe. In the context of one of the poorest countries of Asia, we have an architectural elite being trained to design for only a tiny fraction of the population: the privileged urban rich. There has been no movement toward a broader social conscious-

¹¹ Sustainability is the study and development of how to develop our society in such a way that it can be sustained indefinitely with the materials and energy sources available. Nepal is a country with few conventional energy sources and a limited supply of traditional building materials so the concept of sustainability is of particular importance to the country and for its architects. Being a poor country, purchase of materials from other countries may also be prohibitively expensive.

ness in the training of architecture students in Nepal.¹² With these examples as a beginning it is obvious that there are many areas of possible change in a future curriculum for architecture in Nepal. There are also several areas to understand in making an evaluation of past educational success and suggesting changes for future architectural programs.

In the midst of this history of architecture education in Nepal, I must mention my own contribution especially because it impacts greatly on the group of architecture graduates who will be interviewed for this research. I began my teaching of architecture in Nepal having only had very short teaching experiences in workshops and seminars in India while working on research in the area of Passive Solar Cooling. I began teaching both in the Civil Engineering program and the new Architecture program at Pulchowk Engineering College under the national Tribhuvan University in Kathmandu. Besides other areas of teaching my area of specialty became History of Western Architecture, for which I was considered the expert because I am from the West and completed my architecture training (in the West) at Ball State University.

After teaching a few years at Pulchowk Campus, I was asked by the principal of a private engineering college to take over as the head of the new architecture program they

¹² It may be noted here that there are social and religious values that make it difficult to initiate a program of involvement with the poor by professional architects. The vast majority of architectural students in Nepal are of high caste (Hindu caste system) and generally of high economic status. There is a considerable social divide in the country between the rich and the poor and particularly between the high caste and the low and outcaste members of society. Hindu philosophy tends to blame poor standing in society on punishment for failures in a previous lifetime and thus there is little motivation on the part of the “haves” to help the “have-nots” who are in the process of working through their karma to attain a higher level in life in their next reincarnation.

were starting at Nepal Engineering College (nec). The lure of leaping from solely a teaching job to head of department with responsibility of forming and developing a new architecture program was too much of a temptation to refuse. I shifted to the private Nepal Engineering College in February of 1996 as the only faculty in a new Department of Architecture with the job of hiring faculty, detailing and finalizing a curriculum, procuring and outfitting facilities, admitting students and beginning the program by July of 1996.

By the time the students came in the middle of July we had one other full-time and two part-time faculty for the 30 students who were admitted to the first class. Because of the limited number of faculty and the small number of students, a very close almost family relationship was established in the new architecture department. I had different objectives and vision than many other teachers in Nepal and directed the department in ways that were closer to educational institutions in the West. One area of difference was my intention to break down the “Guru-disciple” teaching style¹³ in the new architecture department that was common in India and Nepal. The traditional educational model in South Asia is one in which the students hold the teacher in highest regard as a total authority and one, who possesses all needed wisdom, and who cannot make a mistake. Typically, a student would be required to “commit vast stores of information to memory, to be used at later times as part of systems of activity about which they have little understanding when they begin” (Laboratory, 1986, p. 1053). Students also expected to receive all information that they would need from the teacher. The teacher tells

¹³ This teacher-student relationship is mentioned by Peterson (2001, p. 5) in describing examples of large power distance cultural examples of Hofstede’s Dimensions where “Teachers are gurus who transfer personal wisdom”.

the students what to learn and they work on remembering that information. Another American educator related a similar experience explaining, “In Germany, students often expect that all content is delivered to them ‘spoon fed’” (Sisco & Reinhard, 2007, p. 362). This educational model stifles student participation because the information is pre-digested and delivered and there is no need for discussion. Lisa Sisco also related about the German students, “Despite my prodding, I never did get the German students to engage in much of a dialogue or conversation” (Sisco & Reinhard, 2007, p. 359). I felt that this model had to be broken down in a professional discipline, where we would be intentionally training students for creative problem solving and independent thinking. As professional architects they would not be in a situation where they would be able to just copy existing form examples or ask someone else for answers to problems, but they would have to develop their own answers. Thus, it was imperative to develop students with searching inquisitive minds, who would be able to take responsibility and not just follow directions of others or to follow pre-existing formulae. I felt that this inquisitive mindset was important for their success in architecture both in South Asia as well as any place they would travel around the world after graduation.¹⁴

¹⁴ It is interesting to note that the students themselves were rather quick to pick up on this concept of greater accountability to think and question and even relished the increased independence and responsibility. (This is in contrast to the experience of Lisa Sisco teaching in Germany related above.) However, some senior architecture faculty were not as enamored by the idea of thinking and questioning students and even felt insulted by students asking questions in areas that had been taken for granted that the teacher was right (who must be telling the truth because they were THE TEACHER [the Guru, the holder of all truth] and should be accepted as authoritative).

Another area I fought for change was in the examination system. The traditional exam system existing in Nepal relegated almost no marks or credit for work done during the semester or year of study and about 95% of the student's final grade depended upon exams taken at the end of the term. In fact, about 5 marks out of 100 were for semester work, 5 marks for final work at the end of the semester, 10 marks for a final "internal" exam given within the department and 80 marks for a final "external" exam proctored by outside authorities. This final exam was usually a two to four hour essay exam without notes taken in a large examination hall. The biggest defect of this method seem to be the lack of interest it instilled in both the students and teachers for work undertaken during the semester, which should be the primary learning time for the students. Because of the lack of motivation by both the students and the teachers (all the work of the semester did not count that much toward the final grade) much of the learning was put off until later in the semester wasting precious learning opportunities. At the end of the semester students would be given three to four weeks study break to prepare for their exams, in essence, learning on their own what was not taught and what they did not learn during the semester. During final examination time one major exam would be held every three to four days meaning that the exam period could last more than two weeks. With the three to four week preparation time and the two week exam period, this meant that nearly three months (six weeks for two semesters per year) were spent solely for evaluation of student progress and thus less time for actual teaching and learning.

After considerable urging I was able to convince the college authorities to raise the percentage of during-semester marks to 50% (in the new curriculum developed by the college) which was beneficial in seeing a change in both student as well as faculty behav-

ior. Now a greater grade weight age was placed on work done through the semester and not just on examinations at the end of the semester. In the more recent curriculum for nec under Pokhara University (PU) the exams are set by the teacher at nec, who is teaching the course. This is certainly an improvement for the students since the 1999 batch of architecture students began under PU. The university does have someone review the exam questions, but it is difficult for an outsider to understand what has been emphasized in a particular course. Like Tribhuvan University and the IOE, most final exam questions under PU are long answer essay type questions that are more difficult to mark since the grading is subjective. Pokhara University will have another teacher check a certain percentage of the marked exams to see if the grading is consistent and fair. As far as the exam system is concerned the students under the PU program greatly prefer this over the previous IOE system of taking exams at another university location written and marked by a different teacher than taught their class.

There were several areas of difficulty in both finalizing and adjusting the course curriculum and I did not have final authority, it turned out, in making all of these decisions. The private engineering college where I was employed was a very top-down administered institution, which did facilitate quick decision making, but many times frustrated faculty and staff, whose decisions would be overturned by higher authorities. The final decision for the architecture curriculum actually was controlled by a civil engineer, who was the principal of the college. One area that made the curriculum easier to write was that there was no core curriculum and all hours could be directed toward the major field of study. I personally feel that this does narrow the vision and understanding of students of architecture. Some liberal arts courses would be good to give the students a

sufficiently broad background to better understand their world and thus design properly for it. However, liberal arts studies are not part of the academies in Nepal. The private engineering college basically inherited the initial architecture curriculum from the government university, Pulchowk Engineering Campus curriculum, because the nec students actually took their final exams through Tribhuvan University Pulchowk Campus and their degrees had both the names of Tribhuvan University and Nepal Engineering College. However, several academic problems led nec to seek association with a different university and in 1998 they affiliated with the newly established government sponsored Pokhara University, and I was responsible for coordinating the new architecture curriculum.

With my involvement in teaching, leading the department, directing the new curriculum development and guiding the architecture department in different than traditional ways, I was greatly responsible for the format, content and delivery mechanisms of the architecture education received by the students of Nepal Engineering College. Also, because of my more informal teaching style, I developed close relationships with nearly all of the students. I met them outside of college hours, they came to my house and knew my family, and I developed with them more of a personal mentoring relationship than what is traditional in Nepal; typically a distant instructor-student relationship.

This explanation illustrates some of the impact that I had on the architecture students of nec that was different than the traditional educational methods. In a way it will be difficult to separate what was successful about the different methods that I employed with the students. Returning to Nepal for this research helped to determine how much some of these nonconforming pedagogical styles have been retained and to what degree

the Architecture Department of Nepal Engineering College has reverted to more traditional Nepali education practices.

Of particular importance for this dissertation research was the connection that was established between the departments of architecture in Nepal Engineering College and Ball State University. This academic collaboration was established through an initial Memorandum of Understanding between the two institutions initiated by the then chair of the Architecture Department at Ball State University, Prof. Brian Sinclair in 1999. The agreement was inaugurated by the visit of about 20 Ball State architecture students to Kathmandu in the inaugural CapAsia¹⁵ trip led by Ball State Planning Professor Dr. Nihal Perera. This initial visit was followed up by student and faculty exchanges in both directions. The link was especially strong because of my own connection having graduated from the College of Architecture and Planning at Ball State University in 1976.

¹⁵ CapAsia is a unique field semester with national and international reputation. It provides an extraordinary opportunity to experience the socially, culturally, and historically different South Asia, and to develop a critical understanding of the participants' own societies, cultures, and environments. The main goal of CapAsia is to profoundly enhance the critical and creative thinking capability of the participants through the learning of social, cultural, spatial practices, and design and planning approaches in a radically different world-region, and to facilitate the processes of learning about their own cultures, environments, and their larger global context. It provides a cross-cultural, inter-disciplinary, global learning experience through cultural immersion, supported by a custom-made curriculum that connects the place of experience and "home" and collaborative studios/workshops with partnering schools guided by faculty from these schools, experts from the host country and city, and the USA. The program is open to upper-level undergraduates and graduate students with an interest in social and cultural aspects of urban and built environments (Explanation of CapAsia from personal correspondence with Nihal Perera, June 23, 2009).

CHAPTER 3

Methodology

Not being an interviewer or researcher by profession I was apprehensive about the interview and analysis part of this research process. Would I be able to find the right alumni? Would I be able to get the students to talk freely with little prompting? When needed, would I be able to ask the right questions to get the right answers to promote this research? Having accumulated a mountain of data, would I be able to draw out useful information from the data?

One part of this research in particular was a pure delight. I was looking forward to re-connecting with the students I had come to know so well during their academic years, and I felt that the basis and direction of my research was sound. All of the students I contacted were positive about participating in the research, and each one was eager to meet and talk after so many years since graduation. There were only two out of twenty-four intended interviews that did not work out because of schedule conflicts.

One disappointing aspect of the research was inability to interview graduates working or studying in some countries other than Nepal and USA because of the complexities of authority structures and limitations imposed by the BSU graduate research

office.¹⁶ The alumni of Nepal Engineering College are studying, working or living in over 15 countries of the world on four different continents and the difficulty finding the proper authorities to permit interviewing of alumni in these various countries was more time and trouble than could be justified in the given time context. Where alumni might be studying the representative universities would have been appropriate overseers of this interview process, but most alumni not in the United States were working and the relevant authoritative body was not clear.

There are significant numbers of nec alumni working or studying outside of Nepal. From the 1997 batch of students, 20 of the 28 students are or have lived, studied or worked outside of Nepal since graduation.¹⁷ From the perspective of this research, it would have been beneficial (though not absolutely critical) to be able to interview alumni living and working in other countries. This will be an important aspect to consider in the longer-term planning at Nepal Engineering College as students will need to be prepared for work in many overseas contexts as well as in the country of Nepal.

There were times in the interview process that I became too involved as a person and not just remotely attentive as an investigator. One example will suffice here to represent the mistakes I made in the interview process. In more than one interview, I inter-

¹⁶ The Ball State Institutional Review Board (IRB) required an in-country sponsoring agency for any research done on human subjects in a foreign country. Since my subjects living in Europe were working in various capacities they did not come under the authority of any university or standard sponsoring agency for this type of research. With only a few interview subjects in any one country, the time spent finding an authorizing agency and getting research permission could take more time than the actual research and thus was not attempted.

¹⁷ Compiled by the author from the interview process asking alumni about their fellow classmates.

jected a comment when discussing with 1996 batch students the situation in our first year of studies. The college had rented a small two-story house, which became the home for the architecture department for one year. We were very crowded in the house because of the significant amount of space taken up by the large drawing desks each student used. We could only fit about four desks in each room except one larger room with six desks, which also became our lecture classroom. Even with the tight spaces it was a special year for the students and faculty; a fact which all of the 96 batch students mentioned in their interviews. On more than one occasion I interjected a comment as I did in one interview: “At the beginning we were more like a family”. The student in the interview where I made this statement heartily agreed with me and these same words were used by other interviewees without my mentioning it; however, it was not my place to insert a pointed comment like this that could lead or direct the interviewee. I could see from comments like this from myself that I was sometimes more of an involved instructor than a detached interviewer.

During the interview process I was amazed at how my mind worked in overtime. Especially with bright, intuitive thinking students, my mind would be stimulated by discussion with them and many ideas would come to mind. I sometimes would jot down ideas that would come to me during an interview and other times it was too much to follow the discussion and try to write down random ideas at the same time. This energizing experience talking with my former students leads me to consider intentionally staying in contact with many of the graduates both for their own encouragement as well as for a source of my own academic stimulation and expanding my ideas and creative thinking.

The answers from the students seemed to be honest and truthful. There were certainly many instances of praise for me as a teacher but these were not meant to butter me up or to gain favor in my eyes as the students were gaining nothing from participating in the interview process. These types of comments could to some degree be expected in the cultural paradigm as students are supposed to be subservient and overly intimidated by their teachers, but I feel that the majority of these compliments were genuine. The situation meant that they had nothing to gain from pretense or flattery.

One area of information from the interviewees was specific input about my own teaching style or manner that the students found helpful. Because I was interviewing the graduates they felt as though they were talking to me and could address comments to me personally about my own teaching. There were several comments like the following from interviewee 961:

But the main thing is the presentation style, the teaching techniques and the giving hand-outs and pop-quizzes and you gave us time to present ... Before that I thought teaching is (the teacher) writing on board, (and the student) writing in notebook. Then you study and write on exam. When I study here with you I found teaching is entirely different ... What I found from you in our study only giving notes is not sufficient. Visual is important. You showed many slides. In photography, in Western Architecture, in Modern Architecture, even in Design you showed the slides and we had visual learning. We also had videos of Frank Lloyd Wright and documentaries. I saw that visual learning is very interactive and good for learning. Showing slides and overhead and that is very effective. If you only show slides is boring. If you only write on board, that is boring. If you only talk,

that is boring. You have that mixed kind of style. You are using board, slides, overhead, and at same time you are talking about some funny things also besides also the subject matter. Some students get bored with the two-hour class. We never felt bored in your classes, I think; especially in your class.

While these comments by students will be useful for evaluating my own teaching, the objective of this dissertation is to look at the entire learning process at Nepal Engineering College. Some of the data will be of further use to me personally, but obtaining comments on my own teaching was not meant to be part of this research and will not be a major part of the analysis.

Because the focus of this research was on the quality of education and the preparation for professional service that the students received, I am not including comments or remarks about individual teachers. Many times in the interviews graduates would focus on an individual teacher or two, usually regarding something negative about that teacher or administrator. There were also instances of comments about one or another specific group of teachers, which I listened to and transcribed in the data, but have chosen not to include here in the analysis. Some of these impressions will be in my mind and I may use that information at some point in the future, but most of these types of comments were stereotype generalizations about individuals or groups of people and have no place in this particular research. These comments come under the category of personal or group prejudice and would not further this research. An example of this type of comment is a categorization of all the teachers who completed their studies from a certain country: “All of the teachers who studied in ... are like this ... ” This generalization is not particular to Nepal

Engineering College students but is a general prejudice found among students in Nepal and thus was not considered consequential to this dissertation.

Because this qualitative research did not look at actual competence in the workplace, but the perception of competence through the eyes of architecture graduates, and to a lesser degree educators and professional practitioners, research was evaluated with the understanding that data from sources was their perception of reality regardless of how closely this perception might align with reality. I took the words of the alumni interviewees at face value unless there is clear evidence why I should not. This was true not only for the alumni's perception of their workplace competence, but also their recollection of their years of undergraduate study that is the central focus of this research.

As I looked over the data during or after transcription, I found several examples where I had not followed through to clarify statements. Also there were times when my follow-up questioning was not good. For example, one student remarked: "The teachers were different at nec". A natural follow-up question would be, "How were the teachers at nec different?" The first statement by the interviewee communicates something but it actually leaves more questions than it answers. An interviewer must be alert to ask how the teachers were different. Another example that came up several times was a statement similar to: "I did not get chance to study at Pulchowk¹⁸ so I studied at nec". Why did the person not get a chance to study at Pulchowk campus? Did they not pass the entrance exam? Did they not take the entrance exam because they were financially limited on how many tests they could apply for or they were not academically prepared at test time? Fur-

¹⁸ By "Pulchowk" the student means the architecture department at the Institute of Engineering Campus in Pulchowk.

ther questioning was needed to find out more specific information and sometimes I did not pick up on this during the interview. In this particular research situation since I had continued contact with the students follow-up questions could be sent; but I have much to learn in concentrating and knowing what to listen for in the interview process. Some people are more difficult to bring out than others. Some interviewees liked to give only short answers. One answer to a question on how the overall learning experience was at nec, the response was: "It was good". Fortunately in this situation I did press on for a fuller explanation. One response in a question about exams was, "I never liked the exams". A follow-up question probing this vague statement did result in the extended explanation, "On the final exam we had to get the notes from the Pulchowk and it was totally different than learning". This particular alumnus had also studied in the States and so an expanding question was how the exam system in Nepal compared to here in the States and the student answered, "It is better over here [in the States]. The teacher who does the teaching should do the exam because he knows what he has taught". Though some interviewees were difficult to get talking and others required clarifying questions, some alumni would talk at great length and a difficulty was deciphering meaning from a multitude of words.

Cross-Cultural Aspects of Research Methodology

An important part of this dissertation research is that it takes place in a cross-cultural context. Cross-cultural research necessitates certain adjustments in the research process. However, I was not initially conscious of this cross-cultural aspect because the country of Nepal has been my home for so many years and the Nepali alumni who were interviewed have been personally known to me. The fact that there were people partici-

pating in this research from two very different cultural backgrounds had not come to my attention. The fact that the cross-cultural nature of this research became evident to me during the research process is some indication of the level of comfort I had attained living in Nepal and working with the people there.

The cross-cultural aspect of this research is especially important in our present American context with an ever-increasing number of people from other countries coming to the United States and the importance for cross-cultural understanding. Even here at Ball State, the campus newspaper has announced university plans to double the international student population in the next few years (Qais, 2008). America's business and social dealings are increasingly conducted in a cross-cultural atmosphere. Even here in the United States cross-cultural research competency will be increasingly important.

One example of cross-cultural difference in Nepal is that people tend to tell others, especially those in authority, what they think the person wants to hear. In our own culture, historically honesty has been a virtue. We are expected to tell others what is true. A person's word is his honor. However, to an increasing degree our own culture is shifting towards people telling others what they want to hear and not necessarily what is true. For example, a very common greeting in America is, "How are you?" This appears to indicate that the first person is interested in the health and well being of the second person they are meeting, which frequently is not true. The expected response to the question is, "I'm fine", which also may not be true. In reality the second person may not be "fine" at all. If the second person were to respond, "I'm terrible" the first person is likely to absently reply, "That's good," because that is the expected reply to the expected response, "I'm fine". (I have tried this experiment many times and usually find that the person ask-

ing me how I feel does not really listen to the answer I give.) This writing is not to be a cultural analysis, suffice it to say that there is cultural conditioning that is not always interpreted the same from different cultural perspectives.

In the context of this research, there are four particular areas of cross-cultural interest.

1. Impact on the students' learning having a teacher from a different culture teaching in their own culture.
2. Impact on the teacher teaching in a cross-cultural situation.
3. Impact on the students learning or working in a cross-cultural situation after graduation.
4. The cross-cultural issues related to this research process: forming of research goals, methodology, analysis and conclusions.

Of these four areas of cultural interest, the fourth is the most important regarding the research process. Questions were asked of the research subjects that touched on these four areas, but the most significant for the research is how cross-cultural issues might have influenced the development of and therefore the results of this research.

It must be remembered that all of the participants did not all hold identical cultural values. For example, one cultural area in Nepal that is changing rapidly has to do with male-female interpersonal relationships. The cultural mores are changing quickly as has also happened here in the United States. One female interviewee was particularly upset by the male-female interaction of the students at Nepal Engineering College. This particular participant had only attended girl's schools through her whole educational ex-

perience up to university. Her freshman year in the architecture department was the first time she had been in class or in the same school building with young men. This close interaction with the fellows was difficult for her. I had no other interviewees mention a similar feeling and I think that most of the other research participants would have been shocked that one of their classmates had difficulties such as these in their nec experience. This one small example is given as representative of the fact that not all the participants had the same cultural framework, though all were part of a larger, general Nepali culture (though possibly that specific term should not be used). It was interesting that none of the female interviewees mentioned gender discrimination, although Nepal is categorized as a male dominated society (Hofstede, 1980).

Several of the students used the word “harass” when discussing the actions of teachers and especially of administrators like the head of department or the principal of the college. I was not thinking intensely enough at the time or I would have had some of the interviewees go into more detail as to what they meant by “harass.” From follow-up discussions with interviewees, it appears that this phrase is used to describe negative or even derogatory comments by some instructors to the students. Some interviewees would give examples of “harassment” which in no way can be related to sexual harassment or similar connotations here in America. I usually was not involved directly in conversations with students and other authority figures to see how they were dealt with on a personal level or what suggestions or mandates were handed out. Frequently I would hear complaints third hand and know of the students’ or administrators’ frustration, but not know the particulars. I need to understand what is happening in these confrontational situations so that I can better help the students and my fellow colleagues in the process of education

and conflict resolution. Quoting one interviewee who referred to me in the third person, you can see both their frustration in the interaction process with some other teachers and their opinion of my interaction with them when I was head of department (HOD): “If we had any problem we came directly to our HOD, Mr. Donn Treese, sir, and he tried to give suggestion to us. He never tried to harass us. This is very good point for him, sir.”

There were many areas of comparative agreement between the students as they looked back on their college years. There was a greater sense of uniformity within each batch of students, which is to be expected since they went through the same experiences together. There was also a considerable amount of similarity between the three different batches though some general things became clear. The first two batches of students (1996 and 1997 batches) were more similar than either of these batches compared with the third batch of students interviewed, the 1999 batch. Some of the differences between the 1996 and '97 batches and the 1999 batch of students can be explained by the considerable differences in circumstances of these different groups of students. The 1999 batch of students began a new curriculum and were under Pokhara University and not Tribhuvan University as the first three batches of students had been (1996-1998).

Cross Cultural Implications on Methodology

The consideration of cross-cultural aspects of this research came late in the dissertation process. It is important to realize that this is not a comparative research of different cultures, (Ember, 2001) but just a consideration of how cross-cultural issues may influence the teaching, learning and research investigated for this dissertation. With the differ-

ent cultures involved there are areas of uniqueness or similarity (Ember, 2001) and the importance here is to have a clear understanding in research undertaken across cultures.

Cross-cultural aspects of research methodology has continued to gain interest and influence over the past 40 years. A cross-cultural researcher from New Zealand recently made the following observation: “There has been increasing recognition of the primacy of culturally appropriate research methodologies that stimulate opportunities for participants to engage with/in the research in powerful and meaningful ways” (Fitzgerald, 2005, p. 18).

It is true that “Epistemology asks, ‘How do we know the world?’ Methodology provides direction as to how we can gain knowledge about our world” (Sparks, 2002, p. 120). Proper methodology is needed in a cross-cultural research situation to be able to uncover truth in the reality of the researched group, and not just perceived reality in the eyes of the researcher.

One aspect of cross-cultural research that plagues most researchers is access to people or opportunities to make connections in order to conduct interviews (Jameson, 1994). Fortunately, in my case this was not a problem because I knew the students very well, having known each of them as their teacher for a minimum of five years of their undergraduate studies.

Another significant difficulty in most cross-cultural research is the language barrier. “Language is an even more imposing barrier in much cross-cultural...research. Few researchers are fully bilingual; functional ability in a second language does not provide the awareness of nuances and subtleties of language...Translation inevitably changes meaning” (Jameson, 1994, p. 39). The alumni I interviewed all studied architecture in the

English language and most of them completed the majority of their education in English and are quite proficient. There were a few exceptions in my research where interviewees were not totally comfortable in English, but overall language was not a major barrier in this research process. In any research situation there is the potential for power relations to exist between the researcher and the subjects. This potential is even greater in a cross-cultural research context. In a culture like Nepal with a high Power-Distance dimension in the culture (Hofstede, 1980) and where I come in as a foreigner (seen as the more powerful position) and conduct the interviews (position of power as the interviewer) and as their former teacher (one in authority over them during their years of schooling) it is easy to see that there is possibility for a significant intimidation factor. “Methodological ethics regarding differences between researcher and subjects hinge on power relations; how power relations are acknowledged and managed, the stereotyping of dominant and subordinate positions within structuring relations, the cultural and political nature of dominant and subordinate positions and the politics and sociology of exclusion and marginalization in relations” (Sparks, 2002, p. 126). This power relationship was prominent in my thinking as I prepared to interview my former students as I was their former teacher and present research investigator. However, during my years as a teacher, I had always had a close relationship with most of the students. I had all of the students over to my house for food and a movie. All the students knew my wife and children and I knew some of the students’ parents and siblings as well. Though there were longstanding relationships with most of the architecture students at nec, by the time of this research a gap of five years had elapsed since I had interacted in a face-to-face manner with most of the graduates. Thus there could be a lingering teacher-student power relationship as well as a

researcher-subject power relationship in the present interview context. To try to break down these possible barriers, I had in writing and verbally encouraged the students to feel free to share their thoughts and not to be intimidated or feel as though they should answer according to the way they thought I was thinking. One aspect working in my favor was that the students were now older, had been working professionally, many had become married and had children and thus the idea of being subjects under me had reduced considerably through the passage of time and maturity of the alumni. It was rather noticeable to me that the 1996 and 1997 batch graduates were more mature and felt closer to an equal status with me than the interviewees from the 1999 batch who, to a greater degree, still considered me their teacher and thus their superior. There were a few of the interviewees who have had extended contact with me while each of us were students at Ball State University and thus closer to an equal status. That relationship seems to have allowed these particular graduates to see me nearer to an equal than nec graduates who had not been in contact with me since their graduation.

It has been noted that “although early attempts at cross-cultural research too often imposed the framework of the researcher’s own culture on other people, current standards demand that evidence be presented that indicates how concepts are seen and experienced by the people in the culture under study” (Triandis, 1984, p. 1007). The cross-cultural sensitivity in this research actually began during my own years of teaching in Nepal. The established mode of instruction was English; both spoken and written by the professor as well as spoken, read and written by the students. Though Nepali was the mother tongue, first or second language of the majority of students, English was well understood having been the primary means of instruction for most of the students for most of their educa-

tional experience. My own speaking to the students was slow, deliberate and with a smaller vocabulary than I would use in normal or teaching conversation here in the United States. Because English was my mother tongue, I helped the students attain a higher standard of English communication both spoken and written. Also, from the very beginning of the architecture program I had impressed on the students the importance of asking questions (even questioning the instructors), sharing their opinions in class, and being open to debate and dialogue with teachers and other students. Though somewhat out-of-character with the traditional Nepal “Guru-Disciple” educational pattern, this open minded, but forced thinking atmosphere was vital to the students being independent, creative architects in the years to come. The first part of my adjusting my speaking to their reduced language proficiency was my adapting to them. The intentional breaking down of the “Guru-Disciple” teaching pattern was my helping to prepare them for the realities of architecture practice and even advanced architecture education in their futures. These two adjustments were also helpful in the research process. The students were more comfortable and fluent speaking with me in English and they were also less inhibited than they might have been otherwise had the “Guru-Disciple’ education pattern been continued during their architecture studies at nec.

Cross-Cultural Observations from this Research

When doing one of the early interviews for this research in Kathmandu I had been intimidated on the basis of language. One of the graduates had been particularly creative and in the top 1/3 of the class but this student’s English language skills were limited. When I set up the interview on the phone the graduate had talked only in Nepali even

though I spoke mostly in English. When I went for the interview we had the obligatory cup of tea. During the initial conversations over tea, the graduate I had come to interview continued to speak primarily in Nepali though the spouse spoke more than 50% in English and I was also struggling with about 50% conversation in Nepali (which was not so difficult covering small talk). Because all conversation had been in Nepali and I was not prepared to do extensive translation of the interviews, I figured this interview would likely be primarily in Nepali and I would gain what I could from the conversation but it would not be counted as a normal interview. However, when we began the interview, the graduate I had come to interview started speaking exclusively in English as though discussion regarding architecture education, which had been in the English language, needed to be discussed in the English language. It was as though informal issues could be discussed in Nepali, but actual “architecture talk” had to be in English. This turned out to be the interview with the most language complications though there was one other interview where struggle with the English language was an issue for a former student.

Though I was researcher, I tried to stay on the outside as a listener and not interfere by asking leading questions that would influence the perception of the interviewee. As was stated so well by a white New Zealand researcher interviewing Maori subjects, “I occupied an ambivalent role as both insider and outsider as I attempted to listen...” (Fitzgerald, 2005, p. 19). As a long-time resident in Nepal, a former teacher and friend to the alumni, I was nearly an insider. However, as a former teacher (and thus authority figure), and as one coming from the United States and conducting the interview, I was in a way also an outsider. Being an insider or an outsider, both could result in either positive or negative influences on the interview process and thus on the data itself. If I was seen as

too much of an insider, and thus in touch with the interviewees circle of associations, I could be seen as a threat who could divulge sensitive information that the respondent may not want to be known to those personally connected to themselves. On the other hand, as an outsider, I may be considered too far removed from the actual details of what happened and an interviewee may not recall as much in an interview setting. In a positive light, as an insider I could be close enough to the alumni that they would feel free to talk, as with a friend, about their experiences knowing that I would be able to understand and relate to the interviewees recollections of their educational experiences. But then, when seen as an outsider, I could be one who is considered far enough removed from the respondent's own circle that I would not be a threat to their revealing their deepest feelings. Thus, the insider/outsider position was a delicate balance of winning trust and friendship as well as protecting that trust and friendship also.

Process

For this program evaluation research a qualitative research methodology was utilized. Selected people were interviewed individually; the interviews were taped and later used to check theme notes and reflections from each interview. Directly after each interview review notes of the interview were written down to retain as much in fact as well as in nuanced understanding from each discussion. Transcription and analysis began as soon after the interviews as feasible to retain as much information from memory as well as written and transcribed observations and reflections.

Because the aspect of cross-cultural content came during and not before research writing began, questions regarding cultural aspects were not asked in the initial interview

process. In some initial discussions over the phone with some of the interviewees I found the cross-cultural topic difficult for the alumni to understand. Everyone I talked with initially, and every previous interviewee I emailed, asked for guideline questions to give them a better idea of how to discuss cross-cultural issues. Those who requested received the following guideline questions:

Cultural questions for nec alumni who have lived outside of Nepal:

The objective of this current investigation is to consider cross-cultural aspects of my teaching and your learning. "Culture" has been defined as "a system of shared assumptions, beliefs, values and behaviors in a given group, community, or nation" (Cheng, 2000, p. 209). Some of the cultural differences in me, the way I taught, the way I interacted with students, may have been helpful and some may have made your learning more difficult. The reason for this questionnaire is to find how my being from another culture influenced your learning at nec and your adjustments to a cross-cultural situation in studying or working outside of Nepal. I really want to find out your ideas on this topic without influencing your thinking; but many alumni have asked for specific questions so that they have something to consider when talking about their cross-cultural experience with me. If you already have some idea of your understanding of cross-cultural issues, specifically as it pertains to your learning experiences from me at Nepal Engineering College, then you do not need to look at or think about answers for the following questions. However, if you need some structured ideas you can look at the following questions as possible guidelines for discussing your cross-cultural experiences.

1. *Can you describe any aspects of the course or curriculum of Architecture at nec that you feel were "out of culture" or improper for Nepal?*
2. *Did you consider me different from other teachers at nec because I was from another country? If yes, explain how you considered me different. (If there is a difference from what you thought before you knew me and after getting to know me you can discuss both of those observations.)*
3. *Can you recall specific instances of how I did things differently from other Nepali teachers? If you remember differences, were these difficult for you?*
4. *Can you explain any way that my cross-cultural impact on you affected your cross-cultural experience when you went to study or work in a different country?*
5. *Can you relate any short story or incident that you remember about me or my impact on your learning that shows a cross-cultural factor? If you cannot remember something specifically related to cross-culture issues, you can explain any strong memory you have.*

Because the participants were having difficulty conceptualizing, I wanted to provide a simpler platform for them to explain how cross-cultural differences affected them. One way to do this was the use of what is called a “teacher tale” or story that the interviewee relates that describes a situation illustrating a point (Kleinfeld, 1983), in this case, how I related to them cross-culturally and how this impacted them, either positively or negatively.

The response to this last minute appeal for additional cross-cultural information was very limited. I sent out by email, called or talked with eight research participants regarding further questions on cross-cultural issues. I received some information back from six participants and complete information from only three which was disappointing and limited potential data on this particular issue.

I utilized no assistant in the field research, or indeed in any aspect of this research process. Especially in the context of the cross-cultural nature of this research it may sometimes be advisable to utilize a culturally relevant assistant. However, because of my long association with the research participants and my in-country residence for so many years, I felt that an assistant would be unnecessary. For a continuation of this research in the future it is possible that I would utilize an assistant as sometimes teamwork is advisable because on a team there are “outsiders to provide objectivity and insiders to provide sensitivity” (Munroe & Munroe, 1986, p. 130). Also I would like to work toward training Nepali researchers to expand this particular research as well as other researchers to continue qualitative research in Nepal.

Participants

The participants were selected from those who were available and willing to participate in the research and were students who graduated from the architecture program of Nepal Engineering College. This group included, graduates from the 2001 through 2005 graduating classes. The system in Nepal is to utilize the year of the student’s beginning their studies and not their graduation year. Thus the students interviewed actually came from the 1996, 1997 and 1999 batches, which combined totaled 95 possible interview

candidates. It must be remembered that each of the classes went through a slightly different educational experience though it was part of the research investigation to determine variations in educational perception from year to year. The more recent graduates may have had a clearer memory of their educational experience and especially regarding their perception of how competent they felt in entering the job world or continuing their studies since this happened more recently. A non-random sample of students/graduates was selected totaling 22 graduates or 23% of all the graduates from the 1996, 97 and 99 batches. The majority of the nec graduates are still in Nepal, though 18 graduates are presently in Europe or Australia and 18 students/graduates are now living in the United States. A total of 40 graduates from these three batches, or 42%, have lived or worked outside of Nepal since their graduation. The number of students provided a sufficient cross section of students in each representative geographical area and from each graduating class. From the 1996 batch, I interviewed eight graduates who included four men and four women. The male/female ratio in the class was 14/15. From the 1997 batch, seven graduates were interviewed including three men and four women with a class male/female ratio of 11/18. In the 1999 batch, I interviewed two men and five women and the class had a male/female class ratio of 12/25. With the significant effort to include a broad and inclusive sample of students the selection of research participants can be considered a judgmental sampling (also known as purposive, deliberate, or selective sampling) (Lonnner & Berry, 1986). Because participants were also selected because of availability and ease of contacting them for a live interview, a convenience sampling process was also utilized.

To determine which students were generally in the upper, middle, or lower third of the class, I checked with the present teachers in the architecture department at nec to give me a breakdown of the students' academic performances. The students interviewed came from all three academic levels of achievement though there was a slightly higher percentage of interviewees from the upper level of academic performance. It had been suggested to me by a very senior architecture educator in Nepal to limit my interviews to strictly the very top students in each class as these individuals would be able to provide the best information on the academic program. However, I had felt that something could be learned from different perspectives and indeed I feel that my research would have been incomplete had I limited myself to interviewing only the academically top students. Having concluded this process, I would say that I received constructive criticism, both positive and negative, from all the interviewees from the upper, middle and lower academic levels. If I were only able to interview a very few contacts I may agree that the upper level academic students may be more observant and knowledgeable, but this is not always the case and when possible, I feel that interviewing graduates from various academic proficiencies is preferable. I can say that I learned at least one unique idea from each alumni interviewed. From some of the interviewees I learned many things, but there were different ideas from all of them. The interview process, as well as working on the analysis, were great learning experiences.

For qualitative research, my interview percentage of 23% of the potential graduates of the three years investigated was a sizeable number. The initial research goal was to interview about 15% of graduates, which may have been sufficient, but the interview process went well and it was very interesting to meet and talk with the students I had

come to know so well during their five years of architecture training. There was also some expanding expectation as some alumni heard from others that I was interviewing graduates and everyone wanted to participate. Besides contacting alumni to interview, I was also contacted by alumni who wanted to be part of the interview process. There were a couple of unofficial interviews that I conducted so that certain people would not feel that they were left out. These “unofficial interviews” consisted of an informal talk, usually over a cup of coffee or Nepali tea, with a former student. No release forms were signed, no written notes were taken, and no information from these discussions was used as part of this dissertation research. These unofficial interviews were not totally useless as relationships were renewed and doors were kept open for future contact and possibly future research including these former students.

The interviews took place in the United States and on a trip to Nepal. Of the 22 interviews, 13 were done in Nepal and 9 were completed in the US. The interviews in the States were done on two major road trips; one to the Eastern seaboard and one trip to the South. All of the interviews in Nepal were conducted in and around Kathmandu where all of the alumni interviewed were residing. There were two graduates who were basically living overseas but were in Kathmandu when I conducted my interviews and thus I was able to have responses from a couple additional alumni besides just those working in Nepal and the United States.

The participants were selected through non-random sampling as there was a concerted effort to provide a cross-section of graduates from different graduating classes, different academic proficiencies and working in various geographical areas. Thus, a type

of quota sampling was used to retain equivalent variation in results over the different graduating classes of students.

There was some degree of availability sampling as I was only able to interview those graduates who are located geographically where I could reach them within financial and time limitations. With graduates living and working in more than 15 countries on four continents it would be a lengthy and expensive endeavor to visit graduates in every country.

Aspects that were considered in choosing graduate interview candidates include the following:

Student's year of graduation: There was a proportional representation from each of the graduating classes of significant size. Some of the graduating classes were as small as 9 students. Selecting a student in a particular geographic location from this small graduating class would certainly negate any possibility of anonymity. Thus students were selected from the larger graduating classes. Students in an extremely small class also may not have had an identical educational experience, as there would have been a considerably smaller teacher-student ratio and thus an atypical pedagogical environment. The three largest graduating classes (the first, second and fourth classes; 1996, 1997 and 1999 batches) having graduate totals of 29, 29 and 37 students respectively, were used for this study to ensure confidentiality and a sufficiently broad sampling of students.

Student's displayed academic proficiency: It would be inappropriate to select only the best students to evaluate an academic program and thus a cross section of graduates from upper, middle and lower academic achievement were selected. There is considerable disparity among researchers on the question of selection of students for this type of

survey based on academic performance during college years. The better students will generally have a more positive outlook regarding their college training and provide a more positive perspective. Students who performed very poorly in their academic training may be likely to provide a negative evaluation of their educational experience. If they did not learn well it is possible that they did not stay in the profession and are working in a different field. In that case, they would not be included in this research because only those graduates currently working or studying in the field of architecture were interviewed.¹⁹ A fairly even proportion of students from upper, middle and lower achievement were interviewed though a slightly higher percentage overall from the upper level of academic performance. From the 1996 batch there were 3-u, 3-m and 2-l level academic students. In the 1997 batch 7 students were interviewed including 4-u, 2-m and 1-l. There were 7 interviews from the 1999 batch: 3-u, 2-m and 2-l.

Graduate's present geographic work location: Prospective interviewees needed to live in the United States or Nepal so that I would be able to geographically restrict my travels because of limitations of time and finances. It did turn out that I was able to interview a couple of graduates living and working outside of Nepal or America as they were in Kathmandu during my interview visit.

Graduate's involvement in field of architecture: An important requirement for selection of interviewees was whether the graduate was working in an architecture related field. Only graduates with a continuing contact in the field of architecture were selected.

¹⁹ There are graduates of the nec architecture program working in such various fields as movie production, banking, and tourism besides many architecture and planning related fields.

Only a very few graduates have moved on to other disciplines so this was not a major problem in limiting the number of potential research subjects.

Graduates who have continued further academic training in architecture: It is imperative to follow up on students who have continued their architecture training at the master's degree level to gain vital information on how the undergraduate training at nec has prepared the students academically. To date a total of 51 of the 95 alumni (almost 54%) in the target group (1996, 1997 and 1999 batch graduates) have gone on for further studies. Many of graduates pursuing further studies have continued their education in the United States; however, four graduates have completed Master's programs from Hong Kong and 12 more in Europe, six in Australia, but more than 17 have pursued architecture studies in America. Several nec graduates have pursued advanced architecture related degrees in Nepal. The master's students were an especially appropriate group to interview as their undergraduate academic background could more easily be directly compared to academic programs in other countries.

Even with all of these pre-determined guidelines on selection of graduates to be interviewed, it must be remembered that some additional information and circumstances at the time of interview travel contributed to the final selection of candidates who were interviewed.

With an average expected response rate of 75% (Garson 2006) from personal interview requests, it was expected that more interview appointments would need to arranged than actually would be completed. However, because of the personal relationships with all of the students, a very high response rate was experienced. Only two intended interviews did not take place because of conflicting schedules between the potential in-

interviewee and myself. With cooperation from nec and the graduates' own relational networks, I was able to contact all of the graduates I needed for this research project.

A second group of people interviewed were educators who had been involved in the instruction of the architecture graduates. This is a rather small group of professionals. Two graduate architecture faculty here in the United States who had taught some nec architecture alumni at the graduate level and one nec faculty were interviewed. The data from these interviews was used to confirm findings from the analysis and was not used as primary research data. There were two senior architecture faculty at the Institute of Engineering, Pulchowk who were interviewed regarding the history of architecture education and as sources to confirm that other research of architecture graduates has not taken place in Nepal. I did interview six alumni who were teaching architecture at the time of their interview. However, they were interviewed as nec architecture alumni and not as architecture faculty who had taught in the first few years of the architecture program. The alumni who are currently teaching at nec were able to corroborate the existing situation in the architecture department which closely parallels findings from this research.

After determining the graduates I was to contact, I set up a priority list of those to request for interviews on the basis of their year of graduation and the feasibility of visiting them. These graduates were told about the research and requested to participate. They were also informed of the permission letter that they needed to sign. I checked with some of the graduates about the possibility of speaking with their employer or a teacher where they are studying regarding being interviewed for this research. One employer of an alumnus was interviewed. This data was used, along with data from the educators, for triangulation in the analysis process.

Data Collection

Data was collected through personal one-on-one interviews conducted at neutral sites usually recommended by the interviewees. These sites included office locations, hotel lobbies, quiet restaurants, etc. One interview in a particularly noisy restaurant was extremely difficult to transcribe with all the background noise.

After initial contact and small talk, each participant was given the letter of consent²⁰ to read and sign. I also read through an “explanation of consent form”²¹ to further clarify the reasons for the consent form and to allow for questions. After these formalities I asked if the participant would allow the interview to be recorded. All the interviewees were happy for the session to be recorded.

Interview voice data was recorded on a digital voice recorder, which was also used to check my notes and themes from the interview. All personal observations at nec and visiting graduates in their work situations was also written down or dictated onto the digital voice recorder for later transcription. The digital recording and notes were copied on hard disk and also saved on an external hard drive and on a USB memory device providing a double back-up of all information with password protection. Photo documentation was limited and just utilized to made observations and for recording of various interview locations. The photo documentation was also stored with multiple back-up and password protection for security. The photos are not used in this dissertation text as any

²⁰ See Appendix 5 for copy of “Letter of Consent” form for alumni participants.

²¹ See Appendix 7 for copy of the “Explanation of Consent” verbal script for alumni participants.

use of photos depicting alumni being interviewed would remove all possibility of confidentiality.

An in-depth interview method was employed with the graduates using a convergent interview approach (Dick, 2005) trying to keep the interviewee talking and sharing their own opinions not overly directed by my questions. When interviewees' comments were not clear or were incomplete I sometimes asked a clarifying question in the middle of a participant's comments. As needed, the initial open discussion approach was followed by a guided conversation approach with open-ended questions to illicit responses from the students' own understanding of their learning experiences. I took key-word and observational notes but not complete notes during the interview to maximize eye contact and observations. A similar methodology was used with the teachers and the employer interviewed.

It did not become necessary to conduct any of the initial interviews with graduates by distance either by telephone or over the Internet. Personally I do not feel as qualified or competent to conduct interviews from a distance as I frequently read people's non-verbal cues during a personal interview and I feel I lose too much information by getting information solely in word or text. My primary mode of interview was intended to be personal interview. There were some follow-up discussions by phone and a few further questions and clarifications by email, but these were limited.

All of the interviews were conducted individually except for one interview of a husband and wife conducted together where both had graduated from the nec architecture program. This double interview illustrated to me the potential in small group interviews as the comments of one person can spark a memory in the mind of the other. Two inter-

viewing together can sometimes produce more information than the interviewing of each one separately. There is the other side of group dynamics as well where the comments of one person influence, intimidate or direct the comments of others who may not want to disagree with the first speaker. I think to continue this research on a more long-term basis I may consider a combination of personal and small group interviews to gain from the strengths of both methods.

Interview Questions

Though a convergent interview process was used to begin each interview; there were certain questions I wanted to have answered in the interview process if the interviewee did not independently discuss those topics. To find these answers, several questions were ready to be asked if the subjects did not cover those topics. The questions I had ready for the architecture alumni are as follows:

Architecture students and graduates:

What do you feel were strengths of your architecture education?

What were weaknesses of your education?

What do you feel was missing or inadequate in your architecture training?

*How well do you feel your architecture education has prepared you for your work
in the field of architecture?*

In some cases it was not necessary to ask any of these questions because the interviewee covered these topics in their own discussion.

Data Analysis

Qualitative research is often criticized for lacking scientific rigor (Mays, 2000). This criticism can be at least partially directed at the coding process, which is the foundational part of the analysis that seeks to understand the message inside the information of the data.

There are many different ways to analyze qualitative data. This research was analyzed primarily using the Constant Comparison/Grounded Theory approach (Ryan & Bernard, 2000) and the coding process integral with this technique. Some have “criticized the use of grounded theory as ‘an approving bumper sticker’ invoked to confer academic respectability rather than as a helpful description of the strategy used in analysis” (Barbour, 2000, p. 1). However, using the Grounded Theory method of analyzing data as the sole means for developing theories from the data (Glaser & Strauss, 1967) is a good means of insuring that one is working towards a validity that comes from the participants and the data and not from the researcher’s own epistemological position.

In grounded theory research steps of observing, collecting, analyzing and organizing data happens concurrently. While interviewing and transcribing the researcher is simultaneously analyzing and continuously reshaping and reforming concepts. “In this way, every piece of data is continually compared with every other piece of data” (Jackson, 2003, p. 24).

All data for this research was collected and retained for the coding and analysis process. The data was all transcribed including interviews, field notes, observations, methodology notes, etc. All of this information was included in the data as part of the analysis. The coding process was also a continually on-going work. Coding began with

the first data when it was collected and continued through the data collection process. Insights gained from coding the initial transcripts helped in the following interviews and later follow-up interviews. One example of how an initial input influenced later interviews is mentioned in Chapter 4 where later subjects were asked about involvement as mentors for current Nepal Engineering College architecture students because of the suggestion from an earlier interview.

The process of coding and the analytical process of grounded theory required reading and re-reading the text to discover and label variables (categories, concepts and properties) and find their interrelationships. This turned out to be a much longer process than was initially planned. The data extended to more than 80 pages single-spaced and the sheer magnitude of the data slowed the coding and analysis process.

A narrative inquiry method was used to personally summarize each interview at the beginning of the analysis. The notes from the interview time along with review of the recorded interview could provide a basis for evaluation by other researchers of my own personal bias, if this is deemed necessary in the future. The summary data and the full transcription data were coded to come up with themes and find consistencies among the participants. A constant comparative method of analysis (Dick, 2005) with axial coding (Kerlin, 2002) was used with triangulation (Barbour, 2000) from the various interviewees to verify observations and solidify conclusions. The data was re-checked for reliability and cross-checked to try to observe personal bias which could skew results. Research as shown that the influence of bias increases with the degree of bias and the sample size. (Malpass & Poortinga, 1986) This re-checking for personal bias did extend time needed for analysis. Had I known the extent of time and energy involved in the data analysis

process, I may have chosen a smaller number of interviews to make the analysis process more manageable.

In the analysis part of the process, I found that it was important for me to peg student comments with an identification of who the students were so I would be able to accurately quote them or refer to them in my writing. I did this by designing a designator for their class and each interviewee as an individual in that class. The class designator was a two-digit representation of the batch by year (1996, 1997, 1999) and a two-letter representation for their name by first and last name. From just looking at my designator, I could remember who the student was and this helped me to keep things clear in my writing process. Fortunately there were no duplicates with this system, though it would have been easy to overcome if there were two students in the same batch with similar initials. These identifications were only for my personal knowledge and they were not used to identify individuals in the final writing process in any way. One important reason for keeping track of them was to be able to cross check for accuracy in a quotation or look for further information from the data that might not have been transferred to a summary page. When I began the final writing process, I found that a class year and two-letter representation for the interviewees would be too evident in indicating who the students are. Thus a revised three-digit designator was developed so the identity of the interviewees would remain confidential. I could mention a particular interviewee, like number 961, but their identity would not be revealed.

Throughout this analysis I use numerous quotations and comments from the alumni. Most of the time specific alumni have been mentioned in a general way by noting a number I have assigned to them. In some instances the context of the paragraph or the

interviewee's answer provides additional information about who the interviewee may be. In these cases I have not used a numerical identifier to help maintain confidentiality. I may only write, "one student stated", or "a particular student related the following example". If several of these different situations are put together, it may be possible for a particular interviewee to be identified. Thus some of the time quotations or comments are simply designated as coming from an interviewee, but a specific interviewee number is not given. I do have records of who that particular research participant might be, but that will not be part of the written record.

Ethics

The format of this research and writing is intended to retain confidentiality of the subjects. In some cases that has been difficult as I interviewed just a few specific senior teachers. However, these individuals were aware that their ideas and opinions may be credited to them. The identity of the students should remain confidential. Only graduates from three large classes were interviewed, which should assure confidentiality.

It can be understood that there is some degree of observational bias on my part but every attempt has been made to limit this bias and I have attempted to disclose to the degree that I am able to understand and delineate, my own epistemological position. Though striving to attain a value neutral position (Christians, 2000), known biases have been exposed and included in the writing of this dissertation.

The intent of this research is to provide a significant degree of internal validity in order to make an accurate assessment of the beginning years of architecture education at Nepal Engineering College. However, as Parker Palmer explains, “every way of knowing contains its own moral trajectory” (Palmer 1987, p. 24). “The way in which we know is most assuredly tied up with both what we know and our relationships with our research participants” (Lincoln & Guba, 2000, p. 182). It has been the aim, and I feel the accomplishment, to retain a high ethical standard in all areas of this research process.

CHAPTER 4

Findings

Even more than my apprehension with the interview process, the analysis of the data was overwhelming to me. Certainly the magnitude of the data was one aspect that made it difficult to initially ascertain meaning and clarity.

For consistency, I have used the exact wording from the interviews. English is not the first language of most of the interviewees and there are mistakes in sentence structure, word usage, etc. However, I feel the actual words from the participants are most effective in conveying their meaning and to some degree their thinking process. In capturing the exact comments of the interviewees, I have decided not to use the designator (sic) in noting incorrect word or grammar usage. There would be so many sics that I am sure the reader would become sic sick. In most every case, I feel the language of the participants is understandable, though it may occasionally take a second or third reading of a sentence to get the full meaning.

Context

The interpretation of the data has to be understood in the context of Nepal during the time period the students' studied. The situation in Kathmandu at the time of this writing (February 2009) is very difficult for the students because of extensive electrical

power cuts of 16 hours a day or more.²² The social/political conditions for the students during the years covered by this research were also not what may be called “typical” though very few interviewees mentioned the difficult living conditions and civil strife during the years of their architecture studies. Unsettling political developments frequently resulted in strikes (locally called “bandhs”), which could close down all transportation, and thus all school attendance for one or more days. The location of the new campus of Nepal Engineering College outside of the city meant that the college was particularly vulnerable to bandhs that affected travel on the roads.

The Architecture Department at Nepal Engineering College began early in 1996 and the first three years the program were under the supervision of the Institute of Engineering (IOE) of Tribhuvan University, the main government university in the country. Though we conducted our own classes the major exams and 80% of the students’ grades were coordinated through IOE. The architecture department started with 30 students in 1996 and we began our educational experience together in a rented house about a half a mile from the main Nepal Engineering College building in the city. These compact quarters contributed to a tight bonding of the students and even the faculty and an educational synergy developed that was unique for the Nepal educational experience. The second year the college moved to a new, larger, rural campus and 30 more students joined the architecture program in the 1997 batch of students. This was still a small group and the addition of several expert architecture teachers (many retired teachers from India)

²² The present power cuts are because of reduced rain and snowfall in the mountains which has greatly limited the flow of water through the mountains supplying the hydroelectric power that supplies 96% of the electricity in the country (IRIN, 2009).

meant that we had a very good faculty for a small number of students and an excellent learning environment was created as far as the quality of teachers and students was concerned. This good learning situation continued for the majority of the school years of these first two batches of architecture students.

By the fourth year of the architecture program (the sixth year of the college) the administration had decided to leave the oversight of the Institute of Engineering and align with a newly established government sponsored Pokhara University. This meant for the architecture program, and all the engineering programs, that a new, unique curriculum would have to be written and an examination procedure established. Thus the 1999 batch of students entered into a new architecture program and what was to become a new environment. The campus location, teachers, and amenities were all the same but the academic supervision was now under a new university. From 1999 batch on the course work, curriculum and examinations were directed by Pokhara University but the remaining years until graduation of the 1996-1998 batches were still under the IOE and thus two different programs were being run in the same department at the same time.

This new environment was created partially by the students themselves. This 1999 batch of students was much larger and compositionally different than any previous batch of students in the architecture program at Nepal Engineering College. The first two batches of students (1996 and 1997) contained 30 students each as mentioned previously. The 1998 batch of students consisted of only 12 students.²³ The 1999 batch included 42

²³ There are several reasons for the fluctuation in number of students in the architecture program in the successive years (1996-30 students; 1997-30; 1998-12; 1999-42; 2000-18) but the reasons had more to do with circumstances outside of nec than any happenings in the college. Some years the main Pulchowk

students when the program started in August of 1999. This larger number of students in the batch, the increasing size of the architecture department and the growing pains of a young college on a new still under-construction campus created a very different environment than was present at the beginning of the architecture program in 1996. The students themselves were different with the vast majority now coming directly from (10+2) science background (no drawing or architecture experience) and also a much larger female to male ratio of 29/13. This compared to the first two batches which were near 50% male and female composition. There were also several faculty changes between 1996 and 1999, or at least before the 1999 batch students graduated in 2005.

By the fourth and fifth, and totally by the sixth year of the architecture program, all original, more senior faculty, had left the college. These teachers were replaced primarily with fresh graduates, most of whom graduated from nec itself. Thus, not only were the curriculum and the general environment of the college different in the later years, but the teaching faculty were considerably different as well.

The students of the 1999 batch themselves were also a different breed of student than those who had begun the program in 1996 and 1997. In those early years there were

Campus IOE would hold their entrance exam earlier and thus students would know in advance if they had been selected at the more prestigious IOE or if they would have to settle for admission to nec. Other years nec would hold their entrance exam early and thus students may take entrance to nec if they passed the exam rather than chance not passing the IOE entrance exam. Each year also seemed to bring a new architecture program into existence. Nepal Engineering College was the first private engineering college with a Bachelor of Architecture program and it was eventually followed by Kathmandu Engineering College, ACME Engineering College and Kwopa Engineering College making a total of five bachelor of architecture programs running in Kathmandu Valley.

a number of students who were graduates of the three-year certificate in architecture program that had been run through the IOE. This program was for students who completed 10 years of primary and secondary schooling and was designed²⁴ to produce architectural draftsmen. Several who had completed that program and were working in architecture and construction fields had experience, maturity, knowledge and interest in architecture and knew they wanted to become full-fledged architects and not just draftsmen and construction overseers. The first two years of the nec architecture program we accepted many of these as students in the Bachelor of Architecture program. As the years went by, there were fewer and fewer of these students applying with some architecture background and a greater percentage of the students were from science background²⁵ meaning that they had taken two years of science oriented schooling after completing their basic ten years of education in Nepal.

²⁴ It is interesting to note that 50% of the 1996 batch of architecture students at nec were from this architecture certificate program. Most of these had not been able to pass the Pulchowk Campus IOE entrance exam which was more mathematically and theoretically oriented but many of these became excellent academic students at nec. One from this 1996 batch who had not been able to pass the IOE entrance exam was, until his last semester, the top overall engineering student in any program in all of Nepal.

²⁵ The options for students after completing the basic first ten years of education in Nepal are for them to go to a trade oriented schooling (like the three-year certificate in architecture program at IOE) or a theory based two year program in science, business or arts. This is called 10+2. The science background was required for entrance into all engineering and architecture programs in Nepal which meant that most all of the students entering architecture had a good foundation in mathematics but a severe lack of artistic training which is also an important part of architecture.

There are many differences generally between the architecture certificate and the science background students though each student is an individual with various personal strengths and weaknesses. The certificate of architecture students generally had a much better feel for the process of construction, hand drawing and engineering drawings and the practical side of architecture. The science background students were usually much better in math, English, and theoretical subjects but had difficulty drawing and understanding practical aspects of construction. Though the important aspect of creativity was probably about equal in the two groups, those from certificate background were more able to draw their design thinking and to utilize their creativity in a building design faster while this process came slower for the science background students primarily because of their limited graphic skills to present and develop their creative ideas.

From the teachers' point of view, I feel we did not do enough to help the students from the different backgrounds to build on their strengths and overcome their weaknesses and we treated all students as the same even though they were learning and understanding differently in the learning process.

Interview Terminology

A short mention is needed to clarify certain terminology the interviewees used as some of their comments are quoted. These terms will be listed here in alphabetical order for reference:

Back Paper—in the exam based academic system in Nepal, if a student fails a course they continue on with their studies even if a course the next semester requires understanding of the coursework they have failed. The student is expected to study the ma-

terial they have failed and take the exam the next semester (or next time the exam is given) along with the exams they are taking that new semester. This process is continued until the student passes the exam they have failed.

Bandh—a local or national strike or demonstration that would frequently include a shutdown of commerce and transportation. This action has its roots in Mahatma Gandhi's forms of non-violent protest against the British, but is more characterized today by violence to enforce the bandh that the majority of people may not really support.

Batch—common in Nepal is to use the word “batch” to describe a class of students.

Bhaktapur—The larger town (90,000+) near the Nepal Engineering College campus and sometimes used as a location name for the campus even though it was a few miles distance.

CAD—Computer Aided Design. Computer software used in the design and drafting of building plans the most famous in Nepal is AutoCAD.

Certificate—in context of these interview comments this is short for “Certificate in Architecture” which was a three year (10 + 3) study at the Institute of Engineering to train architectural draftsman. Some of the students had completed this course before applying for the bachelor of architecture program at nec.

Duwakot—The small town located very near the Nepal Engineering College campus and used as the location name for nec by some students.

HOD—Abbreviation for Head of Department.

IOE—The Institute of Engineering. This is really a part of the national government run Tribhuvan University which oversees several different government sponsored

engineering schools in the country. The headquarters and largest campus of the IOE is in an area of the city named Pulchowk and most of the references by the students to the IOE are synonymous with this one particular campus in the middle of Patan/Kathmandu city area. The students can also be referring specifically to the architecture program at the institute in Pulchowk.

ISc—Intermediate in Science. This is what would be compared in the United States to a high school concentration in science subjects. In Nepal this is a 10 + 2 subject (the ten basic years of academic instruction and then an additional two years majoring in a focused subject: science, arts, business, etc.)

Pokhara (University)—Pokhara University is a more recent government sponsored university headquartered in the central Nepal town of Pokhara (located about 125 miles [200 km] west of Kathmandu). In the context of this document every mention of “Pokhara” means Pokhara University.

Practicum—This is an internship program giving the students experience in an architect’s office and consists of one semester of their 5-year program.

Pulchowk—The Institute of Engineering campus under Tribhuvan University, which has the original and only Nepal government sponsored architecture program in the country. Pulchowk is the area of the city where the campus is located. This campus is referred to in many different ways as will become evident in this word list.

Tribhuvan University—The original and by far the largest government sponsored university in Nepal (100,000+ students on multiple campuses throughout the country) named after King Tribhuvan, grandfather of Nepal’s most recent king. This mega-

university also is the overarching academic home for the Institute of Engineering and it's Pulchowk campus, which has the main architecture program in the country.

TU—short for Tribhuvan University

Themes

There were several themes that emerged through the analysis process. Though some of these themes, like “current job satisfaction”, where specific questions that I had in mind before the interview process, most themes came from analysis of the data and not predetermined concepts. Some ideas surfaced only once or a few times or were topics that seemed of little value and are not covered here in the written analysis. For example, I did not go into detail or follow-up considerably on the comments of the alumni regarding their entrance exam experiences. This included their exam experiences at Pulchowk campus and at Nepal Engineering College. Though of potential research significance when the college looks at who they admit as students; the direction of this research was to evaluate how the college had done teaching those students they had. How the students came to be admitted to nec is considered secondary to the purposes of this research. On the other hand, some ideas may have not been mentioned frequently but were seen as significant like one student's observation about nec graduates' limited self-confidence when they enter the workplace. Though only mentioned one time by one research participant it does seem significant enough for inclusion and possibly important enough to merit further investigation.

Current job satisfaction and educational experience

One of the first questions I asked each student either to break the ice at the beginning of the interview or at some point during the interview process was how they liked the job in which they were currently working. To ask the question in this manner as almost an introductory or “breaking the ice” question was done to put the interviewee at ease discussing something relevant and recent in their experience and to help them be open and honest in answering. In asking this question regarding job satisfaction, especially in the Nepali context where the society does not segregate different aspects of life into different categories, asking about job satisfaction is almost like asking about life satisfaction. This relationship has also been noted in studies in the West (Mora, 2007) and in some cases a person’s whole-life experience is summed up by them in their description of their current job satisfaction. It is important to evaluate the answer using specifics of how they describe their job to sense whether the satisfaction or sadness is from the job or from other life situations.

A deeper reason for asking this question regarding job satisfaction was because some studies had correlated an alumni’s satisfaction in a current job situation with their recollection of their educational experiences training for that job (Delaney, 1997). Those who were frustrated in their current work situations frequently had a more negative view of their academic experiences. Finding out how an alumni felt about their current study or work situation was vital to use as a potential base point for how they might view their academic experience. In my research, in particular, the alumnus with (by far) the most negative comments regarding their architecture education experience also reported the

most unsatisfying work experience. However, the small, narrow sample size of my research is not sufficient for making broad generalizations on the relationship between current job satisfaction and alumni attitudes toward their academic experience. During the analysis process I used a very simple three-point scale to summarize an interviewee's job satisfaction as 3—high degree of job satisfaction, 2—acceptable degree of satisfaction, and 1—dissatisfaction in present or overall job satisfaction. I did not find nor interview any alumnus who was unemployed though I did hear of a few other graduates mentioned by their classmates during the interviews who were either presently looking for a new or better job or who were working in non-architecture jobs because they could not find a job. With the present collapsing financial situation world-wide I have since found out several of the alumni have been laid off and are now in the process of looking for work.

One other aspect of job satisfaction observed was that those who were self-employed as architects universally described themselves more satisfied with their job situation than those who were employed in the offices of other architects. This held true for those who were self-employed in their own private, firms and those who had started group firms with other fellow graduates. Most employed as architects working under more senior architects in offices also were generally satisfied with their work situations, but there was an underlying restlessness or desire for something better. A common phrase among alumni working in other architect's offices was, "I like my job, but...." This type of hesitation was not present among the interviewees who had their own practices. It may be too early in their professional careers and the looming global economic slowdown may cause additional hardships on those working in private practice; but up to this point they are most satisfied in their work. Again the sample size of this research is too small to

make generalizations on relevant job satisfaction between self-employed and those working for others. But the results from this body of research clearly show greater job satisfaction among those architecture alumni working in private practice.

It is interesting to note that this aspect of job satisfaction was a larger component to a positive view of their educational experience than their academic proficiency during their years of study. The overall feeling about their architecture experience was positive for nearly all of the interviewees, even for those with lower academic performance. Also, both those who did well and those who did poorly academically had about the same feeling of their degree of competency when starting their first job or going on for further studies. The one interviewee with a negative current job satisfaction was also the respondent with the greatest negative view of their architecture education experience. The current job dissatisfaction came partially from the fact that this alumni was partially employed outside of architecture and only minimally involved in architecture practice.

Most all the graduates generally looked back on their student experience positively. Student 972 mentioned that architecture “was a fun place to learn”. The 1996 batch of students who experienced the first year together in a small rented house universally felt that learning time there in the small house was better than the succeeding years on the larger campus in Duwakot. Student 962 mentioned, “It was more like a family, just 30 students and two teachers”. Student 963 added several comments on the first year classroom experience:

The Sanepa house was very conducive to a good architecture education ... all students (were) working together as a family interacting with each other and working with friends ... That is a good classroom for classroom education; not the bigger

one ... That space had very good implications to that first year and the projects because it was so interactive ... The tight quarters brought a 'synergetic effect' ... Interaction between students is the most important ... Room is secondary; interaction is important.

One specific learning event was mentioned by many participants and must have had a very significant impact on them. This event was the visit to Nepal by a group of architecture students from Ball State University in 1999. Interviewee 971 remembers: "About twenty students (CAP Asia project) with professor visited Nepal and we did projects with them. It was really good experience of exchanging knowledge between the students of two culturally vast different countries." The visit by the BSU students was only a few weeks but it left a lasting impression and results.

Another major learning experience for the students was their Archi-View exhibition. This was a student-developed project for an exhibition of their work along with some lectures or presentations by different architectural professionals. The creation of the idea, the organization, the gathering of funding, etc. was all done by the students. This major undertaking was a real learning experience for all of the students. The faculty and administration was much slower to appreciate the real learning value in the Archi-View programs and the students remember many disagreements with the architecture department faculty and the college administration over issues with Archi-view.

There were several specific incidents mentioned by the graduates and the overall consensus was that their educational experience at Nepal Engineering College had been positive.

Curriculum

Like several other parts of the interviews, discussions of the curriculum varied among the respondents especially the difference between the 1996 and '97 batches under the Institute of Engineering (IOE) compared to the 1999 batch under Pokhara University (PU) which were different curriculums. Within each of those two groups, IOE and PU, the feelings of the students demonstrated considerable similarity. One thing evident as the alumni look back on their college days is the fact that there has been a technological advance since they studied and what is commonplace today was not imaginable when the IOE curriculum was under development in 1992 to 1994. During those days in Nepal computer equipment was extremely expensive and an architecture office could not dream of paying for a draftsman or junior architect to use a computer for drawing work. With the increased availability and the lowering of the cost of competent computer hardware and drafting and design software, computers are virtually standard equipment in architecture offices in Nepal since around the year 2000.²⁶ Nearly all of the former students mentioned that their computer training, especially on AutoCAD type software was insufficient. Part of the problem in teaching computers was that the faculty was also not proficient in appropriate computer software and thus proper instruction was not done.

The response by the alumni to the teaching they received on architecture related computer software was consistent through the three batches that were interviewed. All

²⁶ This information on computer use in Architecture offices in Nepal is taken from interviews of four nec alumni (963, 971, 976 and 992) as well as interviews with Dr. Sudarshan Raj Tiwari of IOE Architecture Department and Architect Tom Crees in Kathmandu.

alumni universally agreed that training on computers was too limited. A comment by interviewee 963 was repeated many times: “Start computer graphics earlier”. This alumni also added, “Photoshop is also important and not good in nec”. Interviewee 966 agreed stating these comments: “Another thing that we find in our course, since there is only one computer course in all architecture program, it is important to make the student more comfortable in computer. They may be lacking in Photoshop or other, to make them complete there must be more computer courses”. From the 1997 batch there was agreement as interviewee 971 remarked, “Computer and CAD are needed from beginning”. This emphasis for computer related training early was repeated many times; here stated by participant 976: “And also I feel that computers should be introduced a bit earlier. Because now everything is done in computers; drawing, drafting, sketching, everything. We learned computer only after our practicum and everything. Even now the Pulchowk teachers are stressing, ‘you have to use your hand drawing and sketches’”. Even under the different Pokhara University curriculum of the 1999 batch there was concern over the lack of computer courses. Interviewee 992 stated:

Also, more computers should be given sooner in the curriculum. More computers should be linked with the design studio so that we get experience rather than just having the subjects separately. Even in 2nd year some drawings can be done by hand, but after that everything should be on the computer. In architecture offices now, even in Nepal, you do not see drawing tables at all. Only computers.

The 1999 batch made the most progress in gaining competency in the use of computer based software though this was not directly from their architecture program at nec.

In 2002, one of the recent nec architecture graduates helped one of the 1999 batch students learn some basic and advanced AutoCAD as well as new design oriented programs like Sketch-Up.²⁷ This student who had been taught by the nec graduate took it upon himself to help his classmates learn more about relevant graphic software and on their own the majority of the class met for many days during a long holiday break for teaching and training in AutoCAD and Sketch-Up. Thus the 1999 batch became the most proficient in the use of architectural software of any of the classes to graduate from Nepal Engineering College. Four graduates of the 1999 batch have set up their own office in Kathmandu, which specializes in work with advanced architectural software. They do many computer graphic solutions for other architecture offices in the city and even handle work from other countries. With this greater training, experience and interest in the use of computer presentation, the 1999 batch more than other class, used computer drafting and design techniques in their design presentations and they felt that they received resistance from their teachers at nec because of this. Interviewee 996 relates: “In our batch what went wrong, we were trying to do computer related software and teachers were pressuring us to do hand work”. The students were actually more proficient in the use of computers in design and presentation than the teachers and thus the teachers were encouraging the students to do their work by hand and not use a computer.

In contrast to the consistent mention of increased need for more teaching in computers, there was very strong opposition to one computer course that was part of the Pok-

²⁷ This outside of class training on architecture related computer software was communicated in this research by the student who learned as well as by the alumni who taught this 1999 batch student advanced AutoCAD and Sketch-up in 2002.

hara curriculum. All of the 1999 batch interviewees stated their strong discontent and adamant disagreement with a C-programming course that was part of the Pokhara curriculum from 1999. This computer-programming course was part of the 1st year syllabus and was very difficult for the students to pass. Having participated in the writing of the Pokhara syllabus I know that this particular course was opposed by the architecture faculty, but was promoted by the engineering faculty of the college as a means of helping the students to be more proficient in the use of computers for programming. The course, however, was too difficult for the architecture students who generally lacked sufficient mathematical proficiency and understanding of programming to pass the course. Interviewee 992 stated: “The one course that is not needed for sure is that C programming course that we had. We had the topic of programming, which is not needed at all in architecture”.²⁸ Harsh words for the C-programming course also came from interviewee 991 who said:

The C-Program on second semester it was totally hard for all of us, I think, who were in architecture program. It was not related to anything. Before that (the interviewee means “After taking the course but before now”) also I never used it. But it was there and it was very hard for all of us to pass the exam. For the first

²⁸ This comment regarding the fact that the C-Programming course was not needed was made by a student who was able to pass the course easily but still felt that it was not a relevant course for the architecture program. This person stated in the interview, “I knew programming so it was easy for me, but many of our friends failed in that class and they had to do back paper two or three times. That is the subject that is not needed.” This graduate has extensive computer experience since graduation in several different architecture offices and still feels the C-Programming course is not relevant in architecture practice.

time I failed and I had a back paper. Most of the people [students] they were giving that exam for four or five times, I think. That was not related to the architecture course.

There was another course mentioned by a few of the 1999 batch students in contradictory ways. This was the Photography course that was both part of the IOE curriculum and the Pokhara curriculum. There was not much difference in the set-up of the course from one curriculum to the other, but the course was not taught in the same way and technology was also changing making an alteration in the course desirable. The original course was established as a black and white film course with developing and a bit of color slide work oriented to give the students a background in aesthetics, visual design and composition as well as the technical aspects of black and white and color photography and simple development and printing techniques. The students the first three years appreciated the course and were able to use photography during their years of schooling for recording their design work, doing site surveys, etc. By the time of the 1999 batch and the Pokhara University curriculum, the college was not able to provide a location or funding for the darkroom, which had been an integral part of the IOE curriculum. Digital photography was beginning to come into greater use in Nepal and the prices were coming down on the simpler point and shoot cameras though the single lens reflex (SLR) cameras (especially digital single lens reflex cameras) that should be used for a photography class were still prohibitively expensive. Photoshop software was also becoming available and more useful with increased digital computer use in architecture and design in Nepal. However, the college was slow to get the Photoshop software and the teacher

was not very well versed in the use of the software and could not teach the students well.²⁹ Thus the 1999 batch missed out on the film developing and printing in the photography class as well as were greatly short-changed in the new Photoshop software technology. The reactions from the alumni as they looked back on this course were opposite, however. Some students wanted more digital and Photoshop training noting that the darkroom was old technology that was not used any more while others missed the darkroom aspect of the class. Interviewee 992 discussing courses not needed (or needing to be changed) made this comment about photography: “And another subject I would like to say is photography also because it was with the film camera and that technology is no longer used and is not needed”. This student felt the film and developing was old, unused technology while interviewee 996 mentioned disappointingly about the photography class: “we never learned developing”. Some further questioning on this answer revealed that the graduate did not really use film and developing, but felt that it was something that was not as available to learn in the marketplace as Photoshop classes were, and thus it was something missed that could not be recovered. This 35mm film and developing may be something that goes the way of the slide rule and will not be needed in the future. But there will be those who cling to the nostalgia of a past technology.

Another subject that was part of both the Pulchowk and the Pokhara curriculums was structures. There may be more structures courses in the newer Pokhara curriculum

²⁹ This is not a criticism of another teacher as I was the teacher of the Photography course and I know that I was not sufficiently competent in the use of Photoshop to teach the students as the software arrived during the semester the course was taught to this batch of students.

and this was a problem for at least one of the 1999 batch alumni. With considerable concern they related:

The other thing in the syllabus I think the structure course is lengthy and we spend five to six semesters in structures and we calculate everything like a structural engineer does. But when I came here (to the United States) and I had to draw a structural drawing like a floor joist and roof framing, foundation framing, the basic terminology I did not know like shear wall or hold down or something like that. What I needed for here is to know the basics; where is the strong point, where is the weak point, and if that is demonstrated in the college life it would be better for us than to calculate because in practice we do not need to calculate each and everything. So the five semesters we spent in structures in the college, I think that is useless. If it were practical, it would have been useful.

This “theoretical” rather than “practical” instruction was a repeated theme that flows through many comments in many other thematic divisions. However, on the topic of “too much instruction in structures,” some of the other students would disagree. A number of the students mentioned positively the fact that the extensive instruction in structures enabled them to understand structural problems and work out specific structural solutions without requiring a structural engineer. There certainly are more class hours in the curriculum for structures in Nepal than in comparable architecture programs here in the West.

Another vital area that was mentioned by many of the students and also by faculty of nec and other institutions in discussions I had with them, is the topic of Architectural

Theory. This important aspect of architecture education was distinctly a part of the IOE architecture curriculum, but was included in the Pokhara curriculum in a different way. To save course hours for other subjects it had been decided to include architectural theory as part of design studio with professors covering relevant theoretical aspects with each design assignment. However there was no theory exam for the students and no means of oversight of the faculty to see that this extra work of design theory instruction was being completed in the design studios. Thus, for the most part, architectural theory was missing from the learning experience of the architecture students in the Pokhara program. Interviewee 996 aptly stated: “One thing we did not have was architecture theory. I think to get a general idea from the basic that topic would have helped so that we could get some ideas ... Most of us were from ISc (Science) background and we did not know where to start. If that topic would have been there it would have helped us”. One of the nec graduates from the IOE curriculum who went back to teach at nec observed, “One other thing regarding the [Pokhara] curriculum is design theory. Design theory is not in the curriculum. Because lack of this subject the students cannot explain themselves because of this theory. They cannot think in broad sense. This design theory is important for them to explore themselves.” In discussions with senior faculty from the IOE campus at Pulchowk I received the same conclusion: “The students from the nec architecture program do not know architecture theory”. From both the teachers’ point of view and the students, because there was no exam in architecture theory the students did not feel that any lectures on theory were important to understand or remember. Thus a whole part of architecture education has been missing from the nec/Pokhara architecture curriculum.

A few of the graduates commented on the lack of practical training in their academic years at nec. Interviewee 976 mentioned: “I think in the nec curriculum the practical application is quite low and that is why the students find themselves unprepared for their later professional work. Because for myself I found myself more prepared for teaching than for going into the practical work”. Graduate 967 agreed when they said: “I think it was a good curriculum in theory ... (but) the program was weak with hands-on learning”.

One graduate, interviewee 971, saw a larger picture of their architectural training and professional obligation when they commented:

We have to see architecture as a blend of art and technology. Computer and CAD is needed from beginning. I think in their curriculum there should be some elective courses in local style too. We cannot (do not know how to) address the problem of these poor people. We have to have some kind of subjects to address these people so that the architecture will solve the current problems of the country too.

Generally, except for the items mentioned above, opinions about the curriculum were positive. One graduate from the 1999 batch summarizes this attitude on the Pokhara curriculum: “I am happy about the curriculum. The syllabus is better than T.U.”

Pulchowk curriculum.

The 1996 and '97 batch alumni interviewed made comments about the Pulchowk curriculum that pertained mostly to adherence to outdated technology. The development of the Architecture Curriculum at Pulchowk had taken several years and the situation in

Nepal had changed rapidly, especially as regards technology. The process for changing the curriculum at Pulchowk also seemed slow. Thus the students noticed the lack of computer graphics in the curriculum before the faculty. While many of the students appreciated learning how to develop film in the photography class, this also was becoming outdated technology and new Photoshop oriented technology was not in the curriculum. Since the students were learning at our campus but taking their exams on Pulchowk campus from Pulchowk professors we had to keep our teaching in line with what the students would face in their all-important final exams.

Pokhara curriculum.

My inclusion of and agreement with the alumni on various short-comings in this Pokhara curriculum, which I helped to formulate, should demonstrate at least some control of any personal bias I might have because of my involvement in its development. In fact, I think I do not disagree with one critical comment regarding the Pokhara curriculum (except the conflicting comments by two interviewees on the teaching of 35mm film processing in the Photography course where agreeing with one would necessitate disagreeing with the other. I could not rightly be “for” and “against” the same issue.)

For this research and analysis of the success of the teaching in the first ten years of the architecture program at Nepal Engineering College necessitates covering all aspects of the teaching, and the curriculum, for all the years from 1996 onward. However, when considering what changes may be needed in the future, there is no need to make comments on the Pulchowk curriculum because it is no longer used by nec and has no influence on future academic considerations at Nepal Engineering College.

Exams

Historically in Nepal as in the Indian and British educational systems that it is modeled after, major exams are the primary method of student evaluation. Much of the pedagogic process is oriented toward preparing students for the final exam and a major portion of student marks are from the final course examination. In the Institute of Engineering (IOE) syllabus that was followed in the early years at Nepal Engineering College, the final exam taken on the campus of IOE counted for 80% of a student's final course grade. To make sure that students are prepared for such a major part of their final grade taking place in one short two to four hour time period, an assessment test is given as a precursor to the final exam. This assessment or internal exam is given in the college where the student studies by their own instructor(s). Also, up to a month of study time is given before the exams for the students to prepare individually for the major exams they will take.

A typical year calendar will contain two semesters of 15 teaching weeks, one to two weeks of "internal" testing for all of the courses, up to a month of private student preparation before the exam and then two to four weeks of exams for each semester. Only one exam is scheduled every three days or so in order to give the students extra time to study just before each examination. With possibly seven courses and finals to take, twenty to twenty-five days could be required for the examination period. With all the study time, exam time, etc. each semester, the students are involved in studies year round with a very short break between semesters and a few longer national holidays.

Many of the students of nec in the 1996 and '97 batches described their most frustrating memories were studying for and taking exams at Pulchowk campus having little idea what would be on the exams. Interviewee 976 said:

And I was not used to the exam style because what we were taught (at nec) was not what we saw on the exam. That is why in the second semester of my first year I had the first back paper of my life. It was in building construction and in the assessment I had come in 1st in the class but I could not pass the Pulchowk paper. That was actually a blow for me that actually helped me understand the realities in a Pulchowk-oriented way.

This same student went on to explain overcoming the obstacle of learning at nec and taking exams at the Pulchowk campus:

I made friends over there (at Pulchowk campus), and I talked with some of the professors over there and I prepared myself in that way. I oriented myself in that way ... When we took exams at Pulchowk sometimes we did not even study the books but only the notes from the Pulchowk students. Sometimes it was very easy because we had the notes and that is all that was needed. Very little of knowledge is given to the students; they just have the notes.

This was certainly not an isolated response. Another student, 971, described their Pulchowk exam frustration in this way:

That was a very terrible experience. All the time we studied in our college and so many things and many things from the syllabus. All the things were taken and

learned from Nepal Engineering College. But at the time of exam we had to concentrate on what was taught at Pulchowk. We used to run to the notebooks of Pulchowk students, our friends and what was taught and what was asked there. This made so much of disturbances. But in terms of learning the different things there were so many good experiences in Nepal Engineering College. But for the exam we had to concentrate on IOE. We used to interact with Pulchowk friends and nec friends and in our interactions, we found ourselves so much better than them.

One graduate who had the additional experience of working on a Master's Degree in the US after completing studies at nec mentioned: "The teacher who does the teaching should do the exam because he knows what he has taught".³⁰

Among the interviewees from the 1996 and 1997 batches, most mentioned the exam process and all the comments were universally negative. (From the teacher's perspective I can also add a (loud) note of frustration at the difficulty of teaching through a curriculum and having virtually no idea of what will be on the final exam for the students that will count for 80% of their final grade for a course that you are teaching.³¹ Preparing

³⁰ It should be mentioned that though Nepal Engineering College is now under Pokhara University and is running its own exams, the newer Kathmandu Engineering College (KEC) is affiliated with IOE and is experiencing the same difficulties previously encountered by nec in working with Pulchowk campus officials. (This observation is from two nec graduates teaching at KEC interviewed as part of this research as well as casual interviews and discussions with two KEC architecture graduates known to the author who were not officially part of this research.)

³¹ Since I am aware of this situation I am able to relate an experience within the Institute of Engineering itself regarding the difficulty of the exam procedure that involves a different teacher writing the exam than

the students very well usually was the best that could be done.) Talking with both recent students and current teachers from Kathmandu Engineering College, which is under the same academic affiliation with IOE, it is evident that the complications of the exam situation with the Institute of Engineering has not changed.

The exam experiences for the 1999 batch of students were considerably different. Beginning with the 1999 batch of students, Nepal Engineering College became affiliated with Pokhara University, so that new government institution became in charge of exams and final marks students received. nec was the first private engineering college to affiliate with Pokhara University, which up to that time did not have an engineering program. Thus, the faculty of Nepal Engineering College were involved in writing the curriculum and the exam questions for Pokhara University. This exam situation having their own teachers write and mark the exams was much better for the students. There were no particular negative comments by the 1999 batch interviewees regarding the exam system. When asked specifically about exams their answers were typically, “They were fine, sir”.

the teacher who taught the students. IOE was large enough that it had two classes of 45 students each in its civil engineering program. In 1994 there were two different teachers teaching engineering structures to the two different sections of the 90 civil engineering students in the batch; a very senior professor and a more junior teacher. The senior professor wrote the exam and marked the final papers. The results of the exam were that all of the professor’s students passed the exam and 90% of the students of the more junior teacher failed the final exam and thus their structures course. The difficulty of taking exams written and marked by someone other than the teacher who has taught the course is only further complicated when the teaching institution is physically distanced from the exam college. (This exam story was reported to me by one of the 10% who passed the exam from the junior teacher’s class. All exam grades were posted so it was easy for the students to see the results from the different sections.)

Having exams written by the teachers, who taught their course, were considered normal procedure for the students from their years of secondary education.

Grading

There was considerable interest among the alumni with their experiences of grading during their academic years at Nepal Engineering College. Because of the complications and variations of the grading system I was also anxious to find out from the alumni what their feelings were about the grading system they experienced at nec. When students did not mention their recollections on grading on their own, I sometimes asked specifically about this because I felt that it was an important area to discuss.

The grading experience was different between the first two batches and the 1999 batch because of nec's affiliation to different universities. Under Tribhuvan University and the Institute of Engineering and the nec architecture batches from 1996 to 1998, the students studied at nec but took their exams at IOE with examinations prepared by the professors of IOE. This was especially difficult for the students especially because 80% of their marks were controlled by the examination system of IOE under professors who had not taught them in class. The teachers at nec taught the classes for the nec students with homework assignments, quizzes and cumulative tests. The total marks for this work during the semester was worth 20% of a student's final grade and the final exam taken at IOE was worth the remaining 80%. This type of grading system, as you can imagine, was difficult for the students because so much of their grade was determined by a single exam written by a professor, who did not teach them. The nec students felt, but could not substantiate, that the professors and exam system at IOE was prejudiced against them. Inter-

viewee 976 said about grading: “The internal marks were quite fair but I am not sure about the external marks from Pulchowk. I was not at all satisfied with the marks I got. Sometimes I thought I had given the best exam, but my marks were not very good. They did do some mistakes while calculating, while adding up”.³²

Besides the problems of marking by outside professors, there were some alumni who were not always satisfied with the internal marks they received from their teachers themselves. A few students had comments about partiality or other grading anomalies. Interviewee 968 mentioned: “Maybe there was partiality. This was mostly in design. If the teacher does not like the person then the grades will be lower. Maybe this plays a part sometimes”. This student also felt that the “grading was un-motivating”. If a student works hard and learns but receives a low grade, they do not feel that working hard results in better grades and they are not motivated to study harder, but just the opposite: the student becomes discouraged and studies less.

There is a very different situation regarding grades with the 1999 batch of students. By 1999 Nepal Engineering College’s affiliation with Pokhara University meant they would then be responsible for running examinations and grading. Among the 1999 batch students there were numerous negative comments regarding grading. Under the

³² The calculating mistakes the student is talking about have to do with the marking and grading process. As teachers marked the papers they would give a numerical grade for each question answered. Most all questions were long answer essay or problems to work out in math courses. There may be three to eight questions or parts of questions on an exam paper. The marks given for each answer were usually not negotiable, but if a student received much lower marks than they were expecting they could ask for a recalculation of their exam paper to see if the teacher marking the paper totaled all the marks up correctly in determining the final exam grade.

system of Pokhara University the University Exams Division gives all of the final grades as letter grades (A, B, C, D, F) similar to here in America. Like here the letter grade can easily be translated into a 4.0 scale including the hour weightage of the course to determine an overall grade point average. This was a new system for the students and the letter grades did not have any particular relevance or point of reference for the students. In their previous schooling the students would receive their marks as a percentage of 100. Usually, 40% marks was the passing line and 80% marks and above would be considered equivalent to an “A” grade in America. With this history, the grading system of Pokhara University was confusing to the students in multiple ways. First the University Exams Division of Pokhara University generally followed a guideline that 60% was passing and above 90% was equivalent to an “A” grade. However, they used a strongly weighted bell curve that would almost always result in a uniform distribution of grades within a class regardless of the numerical percentages of the students’ marks. Thus, if all the class received marks above 90%, a 97% could be an “A” but a 92% could be a “D” grade. In a different class, a 78% could be an “A” if all the class marks were lower, but around 60% would still be the cut-off for a passing grade. The students were familiar with a numerical percentage being a constant indication of performance in school and the fluctuating grades from similar numerical percentage was confusing. In the Pokhara system, the teachers would total student marks both semester coursework and final exam marks as a numerical percentage of 100 and these marks would be sent in to the university. Afterward, the Pokhara University Exams Division would determine a student’s alphabetic letter grade of A through F. Thus the final grade determination was taken completely out

of the teacher's hands. With this system both the students and the teachers found great frustration and alienation.

Another difficulty with this system is that because the letter grade is the same as used in the American grading system, educators here in America consider the grades identical to the American system. Because of the irregularities of the system in Pokhara University, however, the grades are not really equivalent to grades here in America. Consider the comments of one of the alumni from the 1999 batch: "My GPA seems like a lot when I was in Nepal, like I got overall 3.4; just 3 or 4 people got in our entire batch. But it counts nothing over here. The 3.4 I had from nec and Pokhara University was one of the highest in my class, but over here (in America) it is not considered anything. If I would have been 3.5 or better I would have had scholarship in America". This student was able to maintain above a 3.5 in the graduate program in America and kept a scholarship for the second year of studies having not qualified for a first year scholarship on the basis of the Pokhara University cumulative grade point average.

Campus facilities

Among the interviewees there was a nearly universal criticism of the facilities at Nepal Engineering College, which had to do at least initially with the campus location that is about twelve miles from the center of the Kathmandu; at least seven miles from the Ring Road surrounding Kathmandu on very bumpy roads. In mentioning what they would change about Nepal Engineering College, respondent number 968 was typical: "First of all I'd change the location! It should be in the city core location. It should be located for traveling in city for the students' homes and for the library and other things".

Interviewee 976 saw greater ramifications from the distant location of the campus when they mentioned: “nec has a disadvantage in location and also the (affiliation with Pokhara) university as students prefer Tribhuvan University to Pokhara University”. Another graduate with experience as a student and a teacher at nec mentioned: “But anytime we have small work, not college work; household work, we have to take leave because we are so far away. (This would be going to the bank, seeing the doctor, etc.) [This is] because of the long distance. Location wise is a negative point of this college. You know local bus, it takes more than two hours in place of one hour on the school bus”. The distance away and the time spent in travel also prevented the students from working outside of college time as mentioned by interviewee 991: “It was not any help to work outside to get some money because the college was so far away and there was much time on the bus. Location of the college was far from the town and almost 2-3 hours goes on traveling so we could not work and study at the same time”. One student looking back from the context of their present work location, which is much further outside of Kathmandu but not a transportation problem, was able to see many aspects of the location. This graduate, commented that the “Problem (with) being outside the city: students cannot work! ... Long travel takes time ... For university you need good accessibility ... Accessibility is different than distance or time. (If a) student works on bus then it is accessible; but not working and taking time and energy means it is a waste of time, energy, money for campus being so distant”. This multiple waste of resources is a present and potentially long-term difficulty for Nepal Engineering College.

With the distant campus location there was the provision of campus housing with girls and boys’ hostels. However the hostels were not highly rated by the students and

there were very few faculty who lived near the campus. Interviewee 976 mentioned about the location:

I think I would change the location or facilitate that place better like providing proper housing for the teachers then it would be like a University Campus. I think the worst thing about Nepal Engineering College is that there is no environment that should be of a college and the surrounding also, it is too much dependent on the village. If they could build on the other side of the river closer to the city, then it would be better.

In spite of many negative comments about the location, there were some positive comments regarding the location of the campus. Interviewee 992 said about the campus location: “At first everyone thought the location was very bad. It was an hour bus ride everyday. It was very difficult. As the time went on we adjusted to it. At the end of my studies I only went there on my (motor)bike and it took 20 minutes”. The distant location did have an advantage in being a quiet location far from the noise and congestion of the city as mentioned by interviewee 995 who said: “The location was good too as it is quite far from the hustling and bustling of the main city”. Even this positive aspect sometimes was a negative as 995 continued:

It is true that college location is perfect for study however at some occasions, location was a big trouble especially for the architecture students, as we had to travel all the way to the college just to take one or two theory classes when we had design submission the next day. So sometimes we wished, it would have been easier for us if the college were bit closer to the city.

A few, like interviewee 991, even saw positives in the remote location: “I like the location ... It is a good quiet place to study. If you want to study, you can join nec”.

It is interesting that the only ones having positive comments about the location were in the 1999 batch of students. It is possible that over time the roads had improved and travel times and transport options had increased making the distance less of a physical, mental and financial drain on the students. Also, the 1996 batch of students had their one year experience with the college location in the city as a comparison with to newer rural campus.

Infrastructure comments other than location.

Though the location was most always the first comment regarding the campus, there were a few comments on other aspects of the college infrastructure.

Library. There were many comments by the students about the nec library and most of the comments were not positive. The comment by interviewee 962 was typical: “We did not have many books in the library on architecture. We had to walk to the top of the hill to the library and there were not many books. There were many civil books, but not many on architecture. Compared to Pulchowk, we did not have many books on architecture.” Interviewee 971 repeated this theme: “books were really limited in architecture”. Alumni 991 mentioned a recurring theme: “since we were counting on Pulchowk Library most of the time, we did loose too much time”. About the nec library itself this person recounts: “The book you need is frequently missing. If they could add some books it would be better”. Many students mentioned going to visit the Pulchowk library when needing books. There was about an even split in the students regarding attitude toward

Pulchowk campus library. Those students who had attended IOE for their architecture certificate program felt more comfortable going to the library there while nec students, who had not attended Pulchowk, felt out of place and unaccepted. As mentioned above in the comments of interviewee 991, some students were counting on Pulchowk Library. The students who had studied there felt as though they could visit the Pulchowk Library any time. However other alumni mentioned about the nec and Pulchowk Libraries as did interviewee 966: “The problem with architecture is that we have to go to other library and come to IOE. The people of IOE the people look quite negative to us”. Some of the students did not feel comfortable or accepted at Pulchowk.

Regarding the library at nec, many students also commented that other disciplines at Nepal Engineering College had more books in the library than Architecture. The paucity of architecture books may have been true though there are some reasons for this. Most of the other disciplines taught at Nepal Engineering College are more common than Architecture and are also more mathematically and technically based. The books for most other engineering disciplines taught at nec were printed in India and were primarily text-only books, which could be printed cheaply in black and white. As a result these books were quite inexpensive. The library also contained multiple copies of many of these engineering books; some quantities up to 40 copies each as they would be used as course textbooks which students would check out for much of a semester. On the other hand, most of the architecture books were in color and printed in either Europe or the United States and were easily ten to twenty times as expensive as the engineering books printed in India.

Campus facilities other than the library. Though the library was the most mentioned campus facility, there were also comments regarding other facilities. The canteen and food facilities received a similar negative review to the library described diplomatically by interviewee 966, “The quality of food they provide is not that flattering”. Later on in the interview a similar sentiment was viewed, “The food was not that good”. Finally this alumni shared regarding the facilities on campus: “The food was the biggest problem I could give”. Interviewee 967 continued the same idea with more scathing words, “The food was bad”.

There were several comments regarding the lack of computer and technical facilities. Before 2004 there were not Internet facilities provided on campus because of the high cost of Internet connections in the country. Even now with Internet at the campus, the speed is very slow as the bandwidth is not sufficient for the number of people, who use the Internet simultaneously.

One of the interviewees summed up the infrastructural situation at nec including what they considered one major deficit when they said: “Infrastructure means a place or space, there has to be some good facility as proper place, proper classrooms and other ancillary facilities. And facilities for students like computers and printers and at the same time; things like that. Even we didn’t have an auditorium. That is one of the biggest lacking”.

Faculty / Teaching

Generally positive about teachers. One area where the graduates seemed to show the most insight was in their discussions about the faculty and how they learned, or didn’t

learn; how they were motivated, or de-motivated, by the teachers. Interviewee 973 captures the spirit of many alumni with the following comments:

(Senior teachers from outside in the beginning) were really helpful for us ... We used to have senior teachers who were quite mature and some of them were from America and several were from India. Those people were really helpful for us. In the beginning the college (architecture program) was just starting and the administration felt that senior teachers were needed to get things started. So I think that was the most valuable part. Actually I did enjoy the entire 5 years of my studies even though we did not have good infrastructure and we still do not have good infrastructure but I enjoyed it a lot”.

Interviewee 976 understood that all teachers were not the same when they commented: “Like some teachers inspire us and really bring something out of us, and other teachers are just doing their job at nec as employees and not as teachers and that is why we become a bit misguided and or we are in a bit disadvantage”. This graduate also had ideas for improvement as they commented: “Maybe they could give some practical teacher training classes. Maybe they could encourage them to do some research works because very less are doing the research works. They could also read books and update their knowledge. They could be forced to do research or have the limitation of not being promoted. I think in that way they could help.”

One graduate who also later taught at Nepal Engineering College and thus had experience from both the learning and teaching side mentioned:

While we were studying most of our teachers were from abroad and experienced teachers and professionally well knowing teachers but while I was teaching the teachers were quite young like myself. And the students used to feel that they knew better than the teachers and they felt that we did not have anyplace else to go and that is why we came here for teaching.

Another nec graduate who also taught for some time makes a similar assessment: “During my student period we had fun times and that time I think comparing to today, we do not have senior professors. That time there were many senior professors. From them we used to get a lot of knowledges as they share what they have. I think, I don’t know, in present day all are juniors.” These comments help illustrate a change over time of the stature of the faculty at nec.

Less positive about teachers. Though many of the alumni were very positive about those who had taught them, there were some who were less pleased, and a few who were very critical of their former teachers. Alumnus 972 had many thoughtful observations when they mentioned:

I am not happy with one thing about nec: there were very few professors who were actually making us ask questions which would involve us in thinking architectural meaning of doing something. Their focus was more toward drawing skills, which is important in its own ways but not something so important ... Our debates in school were more due to experiences we shared among professor and students but not necessarily from a large body of text materials. I seldom read books and literature to debate about design and spatial organization. We referred

to standards and talked about them here and there but not through understanding of what it really meant. Reading books for literature review was almost null beside textbooks. It was more from experiences, talks, issues, engineering setup, structural limitations, material limitations, and forming something which was practical all the time ... there was no hypothetical design exploration in terms of form achievements. Even though design itself was not practical, it was derived mostly from imagination which was doable and practical. There was no room for imagination of the wildest thoughts.

Interviewee number 967 went even further. When asked what would be best to change at nec, the response was:

I would get better teachers. It is not important that they teach you something, they need to listen to what you are thinking. Not telling you what to do with their ideas. I had all of these ideas imposed on me. I did not find any suggestions helpful, but I went that way to please them and just get done. The point being, I think teachers need to be more open-minded and there was a great lack of open-mindedness.

There were also student comments about the “Guru-disciple” teaching style common in Nepal and even among teachers at nec. One alumnus commented: “Teacher in Nepal is source of knowledge; he knows everything so that is enough for student. If the teacher teaches one to ten the students learn one to ten and they don’t learn anything else. They will not learn up to fifteen”. The student went on to say that the students needed to

learn more than just what the teacher said. (Hurrah! Something is getting through!) Surprisingly, this same interviewee next mentioned that the teachers needed to study and do research so that they are expanding their learning and not just teaching the same material from year to year. This also was a very insightful comment.

Another, interviewee 971 continued: “nec is a teacher fed education system. Teacher gave note; student read the note and wrote on test papers. There is void of innovation or creativity in student’s part, I suppose”.

Besides the general comments about teachers, there were also specific criticisms of teachers from several interviewees. Alumnus 967 mentioned: “When we were teaming up in group projects; the professor should pick; not lottery thing. I felt this disconnect between students and teachers in design”. This interviewee also mentioned: “And we did not have professors who stayed close by or at the hostel to talk with after hours”. Because of the remote and rural nature of the campus there was only one faculty who lived on campus and one lived in rented quarters nearby.³³ Interviewee number 996 echoed a response of a number of the graduates when they stated: “The teachers tried to impose their type of style in our design; they never gave us freedom”.

Several of the alumni also mentioned a recurring theme regarding the faculty that they were not encouraging or motivating. The word, “harass” was frequently used by the students in describing some faculty, though as mentioned previously, this was not in the context of sexual harassment as understood in America. Several different alumni made

³³ The one faculty living on campus was from Civil Engineering and was in charge of the residence halls. The faculty living nearby was likewise not from the Architecture Department. No Architecture faculty lived on or near the campus.

comments like: “The bad thing about nec is teachers never encourage us”. “There was no sign of encouragement”. “Our guides (5th year thesis supervisors) were just there for complaining, not for helping out”. One graduate summed up those who were not totally pleased with the teaching at Nepal Engineering College when they said: “I am not so much satisfied how we were taught in nec”.

Degree of competency. The degree of competency was a difficult subject to discover. This was the one aspect that looked more at the students themselves as working graduates than at the college; though in this context I was looking for how well the college had prepared them for their work environment. This also is a topic that looks at the interviewee as an individual alumnus and how they feel inside. Do (or did) they feel competent starting out in the real world of architecture practice after graduation?

This topic was one that was usually not brought up directly by the interviewees as a major point, but it would frequently be mentioned as almost a parenthetical remark as one related, “... and when I started working I did not know the practical parts of construction or how to put a building together in a working drawing”. Sometimes I asked a specific question related to the graduates feeling of competency when they began their first job. In some cases this opened a bag of worms and many dreadful memories of difficulties early in their professional career. Others tried to avoid the topic, I don’t know if this was from unpleasant things to recall or nothing specific came to mind. A couple of graduates in particular seemed especially confident as both of them opened their own private architecture businesses almost right from graduation and had very flourishing practices. They both felt completely confident and competent and did not know why

other graduates would not have felt the same way. The broad spectrum of comments on this issue of professional competency may need more research to gain a solid conclusion.

Overall, most of the alumni interviewed felt confident in their profession having worked for some time, but they remember considerable unease in the early days of their initial work experience. This initial lack of confidence may possibly be from two different causes: first, the college is not teaching sufficient practical knowledge so the graduates understand what they are doing when they graduate, or second, the college is majoring on the theoretical background knowledge which they can teach best in a university setting and intentionally leaving the practical day-to-day details for learning in an office once the student graduates and begins working. These two suggestions are related and very likely are both true, to some degree. The interviewees mentioned many times the lack of practical experience in their learning process at Nepal Engineering College.

There was one specific comment that was not just for the interviewee themselves, but was a general comment on Nepali graduates. This research participant observed: “In Nepal students, even when they graduate, are not able to confront the people like clients. They are afraid to talk with clients and contractors. Overall they don’t know or have self-confidence. The college level in Nepal should have something to help the students before they graduate”. The student making this observation felt that the reason Nepali graduates were lacking self-confidence was that they were so sheltered, their parents covered all tuition and college costs and they had no need to work before graduation. This was in contrast to what this graduate observed in America where the students are more independent and appear more self-confident.

The observation of Nepali students lacking self-confidence was a surprise to me. Here again some additional research may be needed to find out how widespread this tendency is and see what should be done to rectify the situation.

Suggestions for Change

As part of almost every interview the topic of suggested changes was mentioned. Though this frequently was mentioned by the interviewees in their own discussion, if they did not mention suggested changes or if they did not elaborate on the topic, suggestions for changes was mentioned in a specific question. Sometimes the alumni would at first feel as though changes could never take place because the “system” would not change and thus nothing else would change to a significant degree. I frequently would ask the interviewee to put themselves in the place of the college principal or architecture HOD and tell them that if they had complete power in this position what would they change. Though many expressed that they would not want to be principal, the question did help to open their thinking to possibilities and cause them to consider specifically what changes they would make if they could. Even in this situation most of the answers were usually within certain boundaries of perceived possibility. For example, many of the alumni mentioned that they would move the campus to into a Kathmandu city location, but none of them considered a shorter teaching week (four teaching days, for example, to reduce transportation), or a situation where they would take some classes directly with architects or other design or building professionals in the city. It must be remembered that these alumni were being contacted at a point in time and asked to discuss and answer questions about their academic learning that had taken place several years previously.

Given more time to consider, the alumni may have more and further reaching changes to suggest. This brings up the point that doing a follow-up interview process with several of the original interviewees could result in many more observations, reflections and suggestions than came to their minds in just the initial interview. Follow-up questioning, particular to clarify a certain point, was done with several research participants. But this is not the same as a full, sit-down interview experience. Going back to re-interview a few alumni could result in more insights.

Most of the specific suggestions for change from the alumni had to do with connectivity and exposure: connectivity to each other as students and alumni, to working professionals, to other architecture educational institutions; and increased exposure to buildings, construction processes, examples of good architecture, to the practical world of designing and constructing buildings. Many suggested a type of exchange program both for students and professors coming to Nepal Engineering College and for nec students and faculty traveling abroad. These exchange suggestions included an entire semester study abroad option. Other means of exposure were suggested like having an expanded guest lecture program including working professionals (from within Nepal and abroad) as well as alumni from Nepal Engineering College. This last suggestion does seem to be a missed opportunity for the college. I asked each of the alumni if they would be willing to participate in some way with their old college and the response was unanimously positive. This connectivity and exposure extended to their existing faculty, students and recent graduates as well. A few different alumni recommended faculty living in proximity of the campus in order to be available to the students outside of regular college hours. Many also recommended an Internet means of networking with alumni and students.

One graduate seems to have given much thought to how nec could be improved as this alumni had numerous specific and wide-ranging suggestions. For a beginning, he felt that students should be selected for admission to the architecture program, as he said, “Based on construction skills and not a written entrance exam”. He also felt that there should be, “Actually building by the students of full scale projects, like a bus stand so they learn how building materials are put together”. He also advocated much more flexibility in the curriculum with options for the students to pursue areas of special interest. These recommendations included the connection of current student candidates globally with other architectural education institutions. Also suggested were more academic options and research possibilities with building materials and construction methods. On a broader scale, this alumnus also suggested a wider networking with other architecture schools, electronically as well as through student and faculty exchanges.

There was a great deal of interest and excitement among the graduates as they considered what kind of changes might make their institution better and help a new generation of Nepali architects to be even better trained than they were. Among most of the graduates there was a feeling of affinity and connection with Nepal Engineering College and for many the idea that the fortunes of the college were to some degree linked with their own future as well.

One idea came up during the interview process with one of the early interviewees and then was part of my questioning in later interviews. This idea was for alumni to be involved as mentors with individual nec architecture students to give the students an outside contact in the architectural community. Though this was initially viewed as an opportunity for face-to-face contact between a current architecture student and a nec alumni

in Nepal, even those graduates who were resident overseas were interested to become involved in a program like this through Internet contact with students.

In Nepal there is neither history of nor tax advantage for people to contribute financially to an educational institution. As a consequence financial contributions to educational bodies is extremely limited. However, I did find some interest among interviewed alumni, especially those who have studied or worked outside of Nepal. All of the ne architecture alumni are still young and many with young, growing families and it is unlikely that financial contributions would be significant from any one individual, but the fact that some alumni brought this up was interesting.

Cross-Cultural Findings

The findings from the additional cross-cultural research were drawn from a smaller database as only six alumni responded to my additional queries on this topic. One new finding when getting feedback from some of the alumni was something I had not expected, and possibly it was because I was asking them to consider cross-cultural issues that this topic materialized. In discussing how culturally appropriate the program of architecture was at Nepal Engineering College one participant mentioned the fact that graduates from the program were really only instructed how to build for rich urban clients. Interviewee 971 related the following:

While I was practicing as an architect people usually felt that “architects” are for rich people. So what can be done to make the course relevant to poor communities? Inclusion of “low cost housing,” and sustainable design” were already there in the syllabus, but lack of hands on experience with materials and techniques in

class triggered a sort of reluctance in practicing to serve and help with “poor architecture” (architecture for the poor).

Much of what was relevant to a cross-cultural situation had to do with me personally as I was the only fulltime teacher at nec from outside of South Asia. Was of my interaction different because I was from another culture? What was different because of who I was and my philosophies and ideas? This was partially answered by interviewee 971 who stated: “I considered you different not because you were from different culture but because you used different teaching strategies or techniques.” Well, I was considered “different.” This might be from philosophical rather than cultural reasons; but was this good or bad for the students? Another participant continued: “But I feel lucky myself that I got opportunity to be educated under you. Your teaching system was way different than others not only in terms of contents in your subjects but also the techniques you used”.

One area I was quite concerned about in my teaching in Nepal was using the English language. Most of the students are better in reading and writing than speaking and listening because they have studied academically in English most of their lives. On a daily basis, however, they would speak English only infrequently. As a teacher I was concerned whether the students would understand me. Considering this cross-cultural topic, looking back, I was interested to find out how the students remembered communication with me, and whether my speaking English as a mother tongue was beneficial in their learning the language better, even an aid to adjusting more quickly, when they moved to an English speaking country. One graduate talked about this when they commented:

But you speak very simple and clear and whatever we listen in Nepal. Here the American people speak is very hard because they use most of the slang and pronunciation is different. But you speak very well and we understand very easily. When we speak with people here it is very difficult, but when we were in Nepal with you it was easy and we ask ourselves, why is it so?

Though this graduate may not have benefitted linguistically through interaction with me, most of the alumni who commented on language issues, and who had experience moving to an English speaking country felt I had been an asset in their language learning process.

Most things different about me were not necessarily cultural, but a difference in teaching philosophy. One student commented: “You were used to interest in finding out students’ interest”. In my understanding this is evidence of a concern for the individual student which may be a cultural tendency, but it is not necessarily missing from the culture of Nepal which is primarily a community identity and not a personal identity culture (Hofstede, 1980). Another student recalled some specific memories: “One history class you were showing some slides and one group picture of our class pops up in slide and you say ‘great future architects’ and we all burst with laugh. There were so many such incidents. It was really interesting to learn/study in such way”. These are not descriptions of a cultural difference between Western teachers and Nepali teachers, but a difference in teaching philosophy and style. At least that is the way I understand these observations.

This crazy teaching style impacted the students. How much of this was cultural because I was an American and how much was personal; I am not sure I can say. How-

ever, in some way my teaching aided some of the alumni when they came outside of Nepal for further studies. One student related: “When I am doing my graduate here in US I feel comfortable with the techniques professor use in classes as I had already exposed to such system in your classes at nec”. Though only a short visit, even the limited contact with architecture students from Ball State who visited Nepal as part of a CAP Asia program had a positive cross-cultural building influence. Discussing the visit of the Ball State students, participant 971 mentioned: “I feel comfortable working in groups with US students here (in the US) as I have some sense of their thinking pattern”.

Another alumni related a similar observation: “I learned from you how the American people think and work. That made it easier for me to come here. Working with you, dealing with you is the same as here. When I work here I already feel that I have that experience with other culture persons. So I do not feel difficult to work with people here”. I think part of my benefit to the students was that, whether they knew it or not, and whether I knew it or not; they were being prepared to live and function in a cross-cultural situation.

Part of my difference, again whether this is cultural or situational, I am not sure; but I was from outside of Nepal and thus brought a broader worldview as part of my teaching and interaction with the students. Interviewee 972 observed, “Your contribution to us was more inclined toward the overall process and global perspective about architecture and you did a good job about it”. I guess this was helpful for the student because they continued: “You were very successful disseminating the picture of global architecture knowledge among us. Today I feel so comfortable understanding the language that I

find myself competing with the architecture professionals here in the USA”. Another alumni echoed this idea when they said:

The first time I visited (USA), I found myself competent with American students because I could understand the language that was being spoken around. In contrast, there were many Indian counterparts who had hard time speaking the architecture language and I believe, the reason is their limited exposure to the cross cultural knowledge about architecture.

One student stated: “I found your design process to be independent of cultural aspects, even though some American aspects were still present”. Possibly this student understood cultural aspects in design better than I did as I did not consider this cross-cultural topic very much as a teacher in Nepal.

I am still not sure how much of my impact was because I was cross-cultural or in spite of the fact that I was cross-cultural. In any case, one student sort of summarized my contribution when he said: “you were there to show us the global picture which otherwise I would have never learned from local architectural practitioners”.

Though I had considered Indian faculty at Nepal Engineering College culturally similar to Nepali teachers, not all of the students felt that same way. One student related: “We did have some Indian professors come to our Design Studios and believe me or not I liked their perspectives as well ... Again the cross cultural setup was there and we learnt a lot from outsiders”.

These observations from the interviewees have been significant. It remains to consider the conclusion of these observations in answering the research question:

How effective was the Nepal Engineering College Architecture Department in preparing graduates for the profession and further academic training during the first ten years of its existence

It is also important to look at how well the application of these observations and conclusions can bring about change to improve the academic performance in the architecture program at Nepal Engineering College as is stated in the application of the research question, which is:

What changes need to be made to the teaching of architecture at Nepal Engineering College to maximize the professional and academic competence of its graduates?

CHAPTER 5

Summary/Conclusions

At the conclusion of this research endeavor it is important to look back and summarize what has been done, evaluate what has been accomplished and see what might have been done differently. Were the strategies and methods employed in this research appropriate? Did this research begin with the right research question? Has this question been answered? Was this research culturally appropriate and did it result in appropriate data? Was the data analyzed in a way that brought out the full and accurate information? What was really discovered in this research process? From this information, what conclusions can be drawn about Nepal Engineering College?

This research has produced some answers, but, as is typical in the research process, it also has revealed more unanswered questions. This research has also opened a door and pointed the way for many more research projects. Certainly more questions have been raised than answered and more research is suggested by this dissertation than is accomplished by it, actually a sign of good research.

This concluding chapter will summarize the research process, findings and conclusions on the way to discussing practical application of those conclusions, opportunities for further research and the contributions of this research to the greater academic community. What I have learned and plan to continue with this research project will also be discussed.

Research Summary and Connection to Existing Literature

To begin at the beginning, I feel that this was an appropriate research topic, an appropriate research target and an appropriate research tactic to investigate for this dissertation project. This was an appropriate research topic, first of all, because research in the context of Nepal is something that is interesting for me; interesting enough to hold my interest through the many months of this project. Specifically interviewing my former students was also a blessing and a very motivating part of this research. With my years of experience living and teaching in Nepal, my understanding of the culture in general and the specifics of the academic situation at Nepal Engineering College also made informative investigation possible.

The direction of this research is also appropriate and will be exceedingly beneficial to Nepal Engineering College specifically because the research is focused on this architecture program and the problems discovered and the solutions suggested can be useful for improving the architecture program directly through implemented changes, as well as indirectly by promoting further research and evaluation of academic progress in the years to come.

This research is also an appropriate topic for research for broader academia both in Nepal as well as the United States. Because this is the first program evaluation completed of any architecture (or engineering) program in the country of Nepal the results as well as the process will be valuable and hopefully a precursor to other academic research in the future. Certainly some of the problems found researching Nepal Engineering College architecture program have relevance to other architecture and engineering programs in Nepal. Since many of the same examination and evaluation processes are used at other

colleges in Nepal, for example, there may be many results from this research that can be considered relevant for other educational institutions as well. Cross-cultural aspects of this research are particularly appropriate for academia in the United States. Not only are there increasing numbers of international students in the United States (Institute, 2008) but there is also a continuing globalization that is breaking down distance and communication barriers faster than cultural barriers (Iwundu, 2009; Nagari, 2009). Most other aspects of this dissertation are not new to academia in the West though further examples of qualitative research, academic program evaluation and use of alumni interviews for evaluation data (Delaney, 1998) are always useful.

It must be questioned also whether this was an appropriate research target. Was it best to select just one college? It might be asked whether a broader focus on the whole aspect of the effectiveness of architecture education in Nepal might have been a more appropriate topic. However, that project would have been too large for this type of research project. I did not have sufficient personal contacts to reach the alumni of five different schools of architecture and the results would not have been as specifically relevant to any particular institution. Conclusions from research at that broader level would have provided useful information only for the government to use in reviewing present and future policy regarding accrediting of architecture programs in the country of Nepal, but I am not sure any lasting results would come from that type of research. On the other end of the spectrum, the research could have been more focused on one single batch of students at one particular institution, like the 1996 batch of architecture graduates from Nepal Engineering College. Though that would have been interesting as a research project and probably could have resulted in more specific data, however, the results of that approach

would only have been of historical relevance and could lead to no permanent academic changes because the findings from only one batch are not necessarily similar to other batches of graduates and that particular curriculum is no longer being taught at that institution. Even if a more recent, single batch of students was selected for study, there still would be no guarantee that the experiences of that one group could be extrapolated to other batches. The selection of three batches of students was sufficient to determine what findings may be generalized over a longer time period and be more typical for the architecture department at Nepal Engineering College as a whole. In view of the dearth of program evaluation research in Nepal, this research, its emphasis and methodology can be seen as extremely significant. Though not a new concept or methodology in America, qualitative research for program evaluation in Nepal is breaking new ground for engineering education and is certain to raise eyebrows even if it doesn't raise eyes to read this particular document.

Another important question is whether this was an appropriate research tactic or methodology. Was the approach of investigating alumni an appropriate means of program evaluation? The alumni brought a great deal of practical wisdom and experience to this research process. They had gone through the architecture program at Nepal Engineering College and all of the interviewees were currently working or studying and thus had opportunity to put their education into practice. The working alumni proved a very valuable resource in understanding the teaching effectiveness of the architecture department. Use of alumni for program evaluation research has proved to be useful (Delaney, 1997) and this dissertation is another verification of that process. Other evaluations are done utiliz-

ing input from architecture design firms, alumni board accreditation pass rates, student evaluations, and recommendations from deans of architecture colleges (Design, 2009).

A further question on appropriate methodology is to consider whether the three specific batches from the years 1996, 1997 and 1999 were the best ones to choose? The answer to this question has to be both “Yes” and “No”. To be more relevant to the existing situation at the college and thus to provide more useful information for present academic evaluation, it may have been better to use more recent graduates that would be closer to the current situation in the architecture department. To use more recent batches, however, would have meant interviewing students from a smaller group, as the more recent batches had fewer graduates. (The incoming batch in 2008 was nearly 50 students so the trend toward smaller batches of architecture students is not a permanent trend.) Using alumni who graduated from smaller batches would have resulted in difficulty maintaining confidentiality required in a narrowly researched and read dissertation such as this. Independent research could be continued by the architecture department with recent alumni to bring this research up-to-date and provide more accurate data for the evaluation process. That very ongoing evaluative research project is suggested by this dissertation. The qualitative research method has proven valuable in producing useful information to conduct a program evaluation and should be continued. There are a couple more reasons for not selecting more recent graduates. Those who have just started working or are even still looking for their first long-term employment would not have the long-range perspective of those who have been working for a few years. Also, an additional personal complication in interviewing more recent alumni is that I did not know the more recent graduates as well and could have had a more difficult time arranging interviews and un-

derstanding them in the interview process. In this research it was not the same as interviewing unknown participants as an outsider because I was very familiar with each of the interviewees. Though there could be positives and negatives about this familiarity with the interviewees, I felt that I could better understand and interpret the research participants because I knew them so well. If an alumni made a comment about a certain class not being taught well, for example, I knew whether they were strong or weak in that subject themselves and likely knew if they worked hard or were just trying to get through a particular course. That does not mean that the interviewee's comments were not taken seriously, but they could be taken in larger context more accurately than would be possible for a total outsider. I do not mean to say that I was pre-judging every participant, but I feel that there was a larger context than just the four walls and one hour time period of a particular interview. Was my interview and analysis compromised because of my epistemological and positional circumstances? Though I mention this epistemological position here, I do not feel that I was overly judgmental of the research participants during this interview process. Many of the personal prejudices I surely had as a teacher were greatly reduced by the passage of so many years and the understanding that the graduates had grown, matured and changed in that time period. Reflecting more deeply on this particular issue at this time, I think that in the interview process it is possible that I was more receptive to the ideas of the participants who had either shown more academic superiority previously or more professional prominence since graduation. However, in the analysis process, the data was in text form and not as the spoken words audibly of the individual and I feel I treated the data more neutrally than I did the individuals during the interview process. This observation of my own research bias is something I need to remember and

consider in future research investigations. I certainly should not need to know my research subjects personally in order to conduct viable qualitative studies. It is possible now that I have gone through this interview and analysis process with this dissertation research that I will now be able to interview people I do not know and still be able to obtain accurate data and trustworthy analysis.

One area considered early in the proposal process was not followed through. It had been proposed to investigate educational objectives, curricula, educational pedagogy and areas of change and adjustment in other architectural education institutions in the United States, India and Nepal (and possibly also in Europe). This was to compare the architecture program and department at Nepal Engineering College to other similar academic institutions. However, as the direction of the research became more focused, it was determined that the goal of the research was to establish how well this particular program had performed in the goal of preparing graduates for the field of architecture. How the statistics of the department compared to other institutions did not seem as relevant as it had in the earlier proposal stages. In completing a full program evaluation it would be useful to have this data from other schools and colleges, but it was not deemed necessary for this dissertation. A result of this dissertation research is to present these findings as partial evidence for the need for certain changes in the direction of the department; additional information from other architecture schools could be very useful in helping to verify the need for these changes. Just one example: the difficulties from the absence of a Theory of Architecture course in the new Pokhara University curriculum is testified to in these pages but a verification that virtually all other architecture schools have specific theory courses could help to prove and verify this finding.

Cross Cultural Summary

The additional research into cross-cultural issues involved with this research resulted in mixed success. I learned much from my own research into aspects of cross-cultural implications in research filling two large notebooks with background information. Unfortunately the further questioning of the alumni on cross-cultural issues was not as fruitful. The responses to my inquiries were limited and those who responded did not have a significant amount to contribute. This was a difficult subject for many to understand and on which to comment. However, the research on the subject was very helpful to me personally and I can see that I need to be sensitive to cross-cultural aspects of research in all of the research process. In the additional research on cross-cultural issues I asked the alumni specifically for a story or example that would illustrate a cross-cultural situation regarding their architecture education or life since graduation, since several interviewees had lived in a cross-cultural environment after graduation. My thinking was that a story or something they recalled specifically about my cross-cultural effectiveness would be easier to remember and explain than theoretical aspects of cross-cultural impacts. This “story” question idea came from Judith Kleinfeld’s use of the “teacher tale” in her research among cross-cultural teachers for Eskimo children in Alaska (1983). However, either because of my lack of communication skills in asking the questions, or the students’ absence of major cross-cultural conflicts, my knowledge gained from the cross-cultural stories was not significant.

Though it would have been advantageous to be able to develop a definition or description of a culturally responsive educator from my own research, I do not feel that I

accumulated data that presented any more complete definition than proposed by La’Shonte Iwundu, a doctoral student in Educational Leadership:

A culturally responsive educator is one who has developed a cultural knowledge base, recognizes the needs of diverse students, develops relationships, communicates effectively, and has developed the ability to respond appropriately to groups of diverse racial, ethnic, and cultural backgrounds and is at the highest level of the process of cultural competence (Iwundu, 2009, p. 2).

This author goes on to summarize six “realms of meaning” that a culturally responsive educator must be skilled in:

Symbolics—being skilled in the use of speech

Empirics—being factually well informed

Esthetics—capable of creating and appreciating objects of esthetic significance

Synnoetics—endowed with a rich and disciplined life in relation to self and others

Ethics—able to make wise decisions and to judge between right and wrong

Synoptics—posses an integral outlook. (Iwundu, 2009, p. 2)

Having a good understanding of the cultural background of students in the classroom is extremely helpful in effective teaching. One small example understood by me but also quoted by Iwundu: “In the Asian culture, avoidance of eye contact with adults is an act of respect, not disrespect. A non-culturally responsive educator would discipline a student for not maintaining that eye contact while being addressed” (2009, p. 4). To really understand students, and thus communicate effectively to them, a deep cultural understanding is essential. This is the only way a teacher is able to both teach so the stu-

dents understand, and listen and observe to understand the students. Another aspect for a cross-cultural researcher to keep in mind is the cultural differences represented in Hofstede's Cultural Dimension Framework particularly the quality of Power Distance as this will influence the power dimension in a qualitative interview situation (Hofstede, 1980).

Work by Kleinfeld, et al, (1983) showed that though there was a difference in cross-cultural adaptation and effectiveness by different teachers, it was not easy to quantify or explain why certain teachers were more effective cross-culturally than others.

A personal goal was established late in this research process to establish some suggestions for improving the accuracy of cross-cultural research. I think this goal has not been specifically met. At this point in time, I do not have specific cross-cultural research guidelines except to say that the greater the cross-cultural assimilation and understanding of the researcher with their subjects' culture, the greater accuracy in the research process. My own cultural understanding gained by ten years living in the research country and an additional ten years in a nearby country intuitively gave me a cultural understanding that came natural without specific thought or consideration. A cultural adaptation by a researcher to a new culture will obviously provide more accuracy in all aspects of the research process from the beginning to end. As in any situation where there is a degree of competency, a culturally adapted researcher must still be sensitive to cultural aspects that they could otherwise miss by not being vigilant in observing, thinking, and reflecting. I found it useful to regularly ask "what" and "why" questions in many situations. What was I observing and why was it (or was it) significant.

Did I miss things? I am sure that I did. My position as a teacher, former head of department, writer of some of the curriculum, now foreign research investigator put me in a position to have certain things clearly in mind and have potential blind spots in other areas. Some of those blind spots may have been at least partially revealed during this process. One situation that repeated itself a few times is evidence of some personal blind spots from lack of sufficient Nepali language skills. There were a few times during the interviews where the participant used a Nepali phrase to describe a certain incident or example of a recurring situation. When I was not familiar with the phrase the interviewee translated the saying. However, many sayings and idioms do not translate as completely as the understanding in the local language and I am sure I missed some depth of meaning by not knowing the phrase and meaning.³⁴

Was this research successful overall? I think that it was. The process was certainly a success for my own learning. All conversations with Nepal Engineering College and the architecture department personnel indicate that there is significant excitement with this research. There are specific findings that should lead to changes in the college, the department, the curriculum and teaching methodology.

³⁴ An example of a cultural idiom not translating completely can be seen in the English phrase, “Something is fishy here.” This saying has nothing to do with fish, but means that something is unusual. A similar saying in Nepali or Hindi language is “There is something black in the dhal.” Here again, the saying has nothing to do with dhal, or lentils, though that is the word used in the phrase. Cultural phrases or sayings need to be understood in their cultural context and not just from knowledge of the words individually.

Analysis Summary and Conclusions

What did I discover from this analysis? One group of findings comes under the category of: “I thought so”. Having been involved so deeply in the program and having taught all of the students who were interviewed for this research there were some things that were expected. The graduates had complained while they were students about the library, the problem with taking exams at Pulchowk, the long bus ride to the campus each day, etc. Indeed some findings were not a surprise.

The analysis of these findings did not find everything that should be included in a program evaluation. One area that is quite important for a privately run educational institution is the area of finances. The topic of the cost of tuition frequently came up in discussions with the graduates, but they could only speculate on the financial footing of the college. There were occasional remarks from the participants such as, “There was never the money from the college for the things we needed in the department”. But neither the financial needs nor the financial resources were ever investigated nor discovered in this research. Even though I was involved to a great degree in the inner workings of the administration of the department, I never knew the financial situation of the college. Suggestions and requests were made from the architecture department for things like computers for CAD instruction, slide projector and later a digital projector, large format printer, etc., but the final decision was never made in the architecture department itself as all financial decisions were made at the college administration level. Finances is certainly important and its absence from this investigation is not to belittle the significance of finances, but is to state that finances is an area that is not covered by this work.

I knew many of the main themes from the analysis to a considerable degree before the start of this research. However, there was another layer of what I will call underlying themes that were repeated themes that are found throughout the main themes that have been mentioned. Many of these underlying themes were not things that I was aware of previously or things that I did not understand in sufficient depth. These underlying themes will be delineated in the following paragraphs:

Theoretical vs. Practical Learning Experience

This is a foundational educational principle that I should have understood and observed more completely while I was teaching at Nepal Engineering College. This is something that I intuitively understood and many of the interviewees mentioned that this was one area of my teaching that was very helpful to them; it was an area that I did not realize some teachers were missing. One comment by a participant was typical: “You taught us more practical than theory like the other teachers. We had to make the models ourselves (models of how different structures work) and we learn how the things work and that is very helpful to us”. I was teaching in a certain way but I was not perceptive enough to see that most of the other faculty were not teaching things practically so the students could understand but were just covering theoretical ideas and expecting the students to understand how those ideas or principles were to be used in actual buildings. (I don’t want to infer here that I was a perfect teacher or that I had even this one area of “theoretical vs. practical learning” completely mastered.) The students said I was not as bad at this as the average teacher and that means there is much room for improvement. Part of the problem with this issue is that many teachers feel that their job is only to ex-

plain the theoretical and then their job is done. It is a foundational difference in the understanding of teaching from “what I teach” versus “what the student learns” and is vital to all of teaching. It is also a foundational difference between knowledge and understanding. At its base this is related to the Guru principle of teaching where the teacher (or guru) tells forth what is right and it is for the disciple to absorb and learn that idea. In this case the guru is not responsible for the disciple learning but just for his own proclamation of the idea.³⁵ On an exam a teacher can find out what a student knows, but it is only in a practical working situation that a teacher learns what a student understands. I remember looking at the work of fourth year students who were working as a group on working drawings (detailed drawings of how a building is to be constructed). I was not teaching the course but just walked through to see how the students were doing. At one student’s desk I observed some lines that were incorrect and I asked the student what those lines represented. The student freely admitted that they had no idea what the lines meant, they were just told to draw it like that by their classmates. Most of the students had never seen a building being constructed to know how the different parts of the building were put together, especially those parts that were hidden from view when a building was completed. There is a difference between knowing and understanding.

One very significant learning experience for each of the groups of students was their participation in Archi-View, a student initiated and run presentation of their work. Though several of the students interviewed commented on my initiating this project, I

³⁵ To me, at its core, in a true guru-disciple teaching or mentoring situation the guru should be responsible for the disciple grasping and being able to apply any truth that is conveyed; not just that the guru has communicated it.

feel it was totally the initiative of the students. The first year of the architecture program when the department was located in a house in the city, the student work was so good that I wanted them to display what they had done. We had a small display of their work in our studio and invited the community (very few came) and the other students of architecture at the nearby Pulchowk Engineering College. Virtually all the architecture students from Pulchowk came to the exhibition as well as many other students and the exhibition was a great success. The Pulchowk students were impressed by the work and understanding of the new architecture students. This experience must have had a big impression on the students of the first (1996) batch. After moving to the remote location of the new campus, the students wanted to have a similar display of their work. However, it would not have worked to have the display in our own college because of our distant location from the city. Totally on their own, the students went to building suppliers and architecture offices and secured funding, rented a hall in downtown Kathmandu, got advertisements and printed a brochure, undertook an extended measured drawing project of an historical townscape that needed restoration, collected and displayed their own project work, gathered speakers on a focused architecture topic; and overall put on an excellent display and workshop. This Archi-View display became an annual event needing much independent work by the students themselves. Though this was not a college or departmental sanctioned event or official learning opportunity, it was one of the biggest learning encounters for many students. This event is a perfect example of the type of experiential learning described by Houle (1980) where learning is not sponsored but is generated by the people themselves. Some of the learning was directly related to classroom type work as the students did drawings and made models. But most of the learning: organizing themselves,

taking initiative to seek funding for renting private exhibition space, inviting major public figures like the prime minister, etc. were learning situations that were useful to the students but beyond the architecture curriculum of the college.

The interviewees also frequently mentioned how much better they learned and more they understood when they actually did work with their hands. Most all the alumni indicated that they had learned better through practical experiences during their years at Nepal Engineering College. This observation correlates with many writers on the topic of experiential learning (Brookfield, 1983; Kolb, 1976; 1981; 1984; Kolb & Fry, 1975) and reinforces the importance of practical learning opportunities for students in the process of higher education. Examples of this experiential learning mentioned by the students included developing photographs in the darkroom, working with wood in a class on hand tools and construction methods, doing models in design studio, and particularly the alumni from the 1997 batch who had been able to visit Ball State University for one semester mentioned how helpful the time designing and building playground furniture was for them as they actually used hand tools and built the play equipment for a daycare center. This type of learning typifies the learning experience described by Peter Jarvis when he wrote that experiential learning “is actually about learning from primary experience, that is learning through sense experiences” (1995, p. 75). Some of these learning experiences can, and should be, planned into an educational program and some happen through student learning opportunities outside of the classroom or planned educational exercises.

One other significant area of student learning that was mentioned by some interviewees was the learning that happened working in groups. Occasionally these group exercises seemed forced and were sometimes a struggle. Some respondents felt that the

groups were not always put together in a way that was most beneficial for learning. That is, they experienced many interpersonal relationship problems in their groups. Other groups put together for a project became lifelong friends and are still very tight as a group today, many years after graduation. As one student recalled, “Our group from photography, from the first year, we are still very tight together. We didn’t know each other till you put us together in the group and we were able to learn so much from each other. Even till today we call each other up and meet together”. The learning in the groups was frequently from other members of the group and not just students learning directly from the material or from the instructor. As was mentioned by one interviewee, “The tight quarters brought a ‘synergetic effect’ ... Interaction between students is the most important”. This group-learning paradigm is well covered in the literature (Johnson & Johnson, 1996; Lewin, 1948) and is again reinforced with findings from this dissertation. The interviewees mentioned that working in groups in college help them for the real world situation where they often work in architectural teams on a design project.

One aspect of learning styles that was evident while I was a teacher in Nepal and also came out in the interviews was the importance in the minds of the students of memorization as a major means of learning. This is certainly a culturally based learning method that is strongly instilled in the minds of the students from the earliest years of study. The typical exam method of long essay answers also encourages the students to memorize as much material as possible in order to be able to write long, and hopefully accurate, answers. On this topic, Anderson (1988) asserts that we need to remember differences in learning and communication styles that are culturally based. Students may learn better in a particular manner because they have learned to learn that way. As such, there is not a

single “right” way to learn but a way that works best for an individual student or a culturally similar group of students. In the West we link memorization with “learning without thinking” and thus we may disregard the advantages of a memory learning technique in our goal to achieve reflective learners. It should be possible to add a thinking-reflective emphasis without totally disregarding a strong culturally based memorization-learning methodology.

Teacher Insecurity

A revelation to me was the degree to which insecurity among the teachers was evidenced. Again, this is something that I as a supervising teacher should have noticed during my years of teaching at Nepal Engineering College. I hope I am drawing the proper conclusion of these observations of the actions of the teachers. This insecurity is evidenced by way the teachers discouraged the students from using the computer in their projects. The students in the 1999 batch especially were using the computer not just for presentation using AutoCAD or Photoshop but were utilizing programs like Sketch-Up in the conceptual and design phases. Because the teachers themselves did not understand the computer programs they did not want the students using them. This same insecurity is shown by faculty not letting senior students pick their own thesis subject, or if the students pick a subject they are encouraged to change that to a type of building that the teacher already knows. Several of the alumni from the 1999 batch recalled having projects like an airport or an amusement park being rejected because the faculty assigned to them did not understand that type of building. A good teacher hopes their students will go beyond them and not be limited to what they themselves already know. The teachers

seem threatened if their students knew something that they do not know. This is a breaking of the Guru-disciple mold; the disciple is not to know more than his guru or the guru is not needed.

A result of this teacher insecurity is that the teachers become more focused on themselves and what they are doing than on the needs and learning of the students. The success of the students becomes a means of personal fulfillment and accomplishment for the teachers rather than the teachers being concerned for the welfare and learning of the students themselves. It becomes too easy for the teachers to treat the students as “projects” and not as “people”. The focus of the teachers can become where the students are right now in their learning process and not on where they can be when they are fully trained and competent. Johann von Goethe suggests a different path: "Treat people as if they were what they ought to be and you help them become what they are capable of being" (Wlodkowski, 2000, p. 1).

This same teacher insecurity and the fact that the teachers were taking their own personal sense of accomplishment from the students meant that the teachers were frequently harsh with the students. The students themselves (particularly the 1999 batch of students who primarily learned from the younger faculty) frequently mentioned that “the teachers did not encourage us, they only discouraged us in what we wanted to do”. This correlates with Wlodkowski’s sixth motivational element³⁶ in education that the students

³⁶ It may be useful here to summarize all of Wlodkowski’s six motivational elements in the adult learning process as they are all relevant to improving the teaching and learning process at Nepal Engineering College. These six motivational elements from his book can be summarized: (1) Attitude (the learner must have a satisfying experience in the learning setting); (2) Needs (the learning experience must focus upon

need reinforcement or positive feedback from their learning accomplishment (Wlodkowski, 1988). For improved learning the teachers' focus must be more on the students and less on themselves.

Concern for the individual

To me a foundational requirement in teaching is to have a concern for the individual student. The objective is not to speak forth wisdom, but for the hearers/learners to gain wisdom. This general concern for the students does not always seem evident in the remarks by the graduates. The following comment was typical as an interviewee was comparing me to some other teachers:

Not just looking at the exam: you (the students) are good and you are bad. But you (me the teacher) are look at the whole performance and you mark all these things. The other teachers are only concerned about the exams and how a student does. If a student does better in the exams then he is better than the other one.

They (the other teachers are only concerned about how the students) perform only in the exams.

what the adult perceives to be his or her needs); (3) Stimulation (the learner must feel challenged that this experience will be personally productive); (4) Affect (there needs to be a "feel" that the learner is, in fact, achieving, progressing, and conquering); (5) Competence (the learner actually experiences genuine and meaningful accomplishment of need satisfaction); and (6) Reinforcement (there is positive feedback as to personal accomplishment). (Patterson, 1993, p. 127).

This ability for the teachers to be personally concerned for the students' welfare and learning cannot come when the teachers themselves are insecure and looking to student performance for their own sense of accomplishment. Thus the concern for the individual student is dependent upon the teachers being secure in their own perception of themselves that they are not looking to the students for their own sense of accomplishment.

Administration

Just as there were criticisms of the faculty, the college administration received its share of comment by the interviewees. There were many direct and indirect comments about the administration that came in the midst of comments that were grouped in other themes. The evaluation of the administration, like the topic of teacher insecurity, comes by way of an underlying theme that does not come out directly.

I will say that comments from the participants regarding the administration in the early years of the architecture program were generally positive. There was regard for the administration because they had gone out of their way and likely beyond budget limitations to hire experienced, senior faculty to help get the architecture department off to a good start. Much was spent initially on providing excellent student desks and some other equipment. Positive comments about the early faculty were numerous and it was only a few alumni who connected that idea with a positive action of the administration. As a faculty and active participant in the departmental administrative structure I can agree with the graduates' observations on the actions of the administration in the early years of the college. Some of the interviewees attributed that favorable administration participation in

the architecture program with my presence. There were several comments similar to: “When you were there, sir, they (the college administration) could not go against you and they did many helpful things for architecture”. Personally I believe an apparent administrative change of heart was more likely a change in administrative opinion or actions that coincided with but were not necessarily related to my leaving the college in 2002 and returning to the States. (Another major occurrence at about the same time as my leaving was that the same administrative personnel and financial body responsible for Nepal Engineering College also began Nepal Medical College, which drew away key administrative leaders’ time and attention from the engineering college. This new enterprise may have also resulted in some new financial pressures for the administrative oversight group.)

Disappointment with the administration came from several instances where, from the alumni’s perspective, the administration did not see the value in certain aspects of the architecture program. These included things like the insistence on the C+ programming course in the architecture curriculum at the exclusion of architecture theory. Also mentioned was the inability of the administration to see the importance of having outside architecture professionals be part of the experience for the students either as jury members, outside critics, guest lecturers, etc. (As in other cases, these observations were the stated belief of the interviewees, and may or may not have been the actual understanding or intention of administrative personnel.) The general consensus is that architecture is viewed by the administration as something less than civil engineering, and thus, something civil engineers can thoroughly understand. The architects seem to feel that architecture is something more than civil engineering, and thus, beyond what civil engineers can

understand. To those in the architecture department this view that the administration considers that architects should be like civil engineers is evidenced by the inclusion of so many structures courses in the architecture curriculum but no appropriate sociology or psychology courses for the architecture students to understand how people think and live individually and collectively as a society. The aspect of the administration not understanding architecture was mentioned by the interviewees in the way they restricted changes students wanted to make in their design studios. At nec the architecture studios look like engineering classrooms with all the desks aligned in rows (though the desks are not bolted to the floor). In most architecture studio spaces, the room arrangement is very loosely organized (or disorganized) in a creative way. To the students, this seems like an administration that does not understand them or their needs.

The alumni also seemed to feel that, especially as the years went on, that the administration was not supportive of the architecture department. For the students this came out frequently regarding willingness or unwillingness of the administration to provide finance for certain architecture activities. A specific example that cut deeply in the hearts of the students was refusal of the college to support some architecture programs the students organized on their own. The students acquired funding from various construction firms, architects' offices, building materials providers, etc. and were able to rent downtown facilities and even arranged very high government representatives to come and inaugurate the festivities for their Archi-View exhibition. I was very impressed by the work and initiative of the students, but they were disappointed in support from the college.

Through these are disparaging comments about the administration, it is not my intent to support or give validity to the student claims or accusations, but just to note that

they were brought out in the data. I am sure that discussions with the administration would provide a very different perspective. That remains for future research.

Besides these “underlying themes” there are also some associations that can be considered. There are many conditions that can influence an association between happenings (Ember & Ember, 2001). One example from this research is the association between the greater number of junior teachers in the architecture department at nec in more recent years, and the greater student dissatisfaction with their teachers. This association is noticed and the correlation has already been drawn by those who are nec architecture graduates and now also teachers in the architecture program themselves. As mentioned previously, in the early years of the department there were five full professors (including four from outside Nepal) and two associate professors besides the younger faculty. At present the department has two senior professors, no associate professors with the remaining being assistant professors junior professors and teaching assistants.

This dissatisfaction with the younger teachers was mentioned by both the students who had younger teachers and by the younger teachers themselves, some of whom were nec alumni from earlier batchers who are now teaching. The 1999 batch graduated in 2004 and several newer batches of students have arrived and these young faculty relate this even stronger, “While we were studying most of our teachers were from abroad and experienced teachers and professionally well knowing teachers but while I was teaching the teachers were quite young like myself. And the students used to feel that they knew better than the teachers and they felt that we did not have anyplace else to go and that is why we came here for teaching”. This might not be unexpected, but because of the greatly increased percentage of junior teachers in the Architecture program at Nepal En-

gineering College this translates into the potential for considerable student dissatisfaction with teachers.

Though this research represents a very small sample, the presence of a strong relationship between student satisfaction with teachers and the education and teaching experience of the faculty is significant. Further research may be needed to examine the relationship between faculty experience and student satisfaction with their teachers.

Another observation/conclusion from this research is that there does not appear to be a clear teaching objective in the architecture department at Nepal Engineering College. This is more an observation from what was not communicated by the participants or found in the data. None of the interviewees mentioned a standard or goal that they felt was an objective of the instruction they received. I probably would not have come up with this observation if I had not found so much in my research on the importance of an educational body having clearly stated mission objectives (Bok, 1986; Saskatchewan, 1996; Texas, 1997; Wright, 2004). One reason this idea became so obvious is that conducting this research there was need to look for a standard to use as a basis for evaluation and none was found. Having taught at the college, I know that it is an unspoken objective to prepare the students for professional careers, but there is no stated mission objective and the results of this are felt in a disjointed and haphazard approach to instruction. I know that discussion about mission statements, goals and objectives is not typical in Nepal and may be considered culturally foreign to them. However, the lack of clear direction was observed in this research process. Again this may be because my research predisposed me to be on the lookout for this; but it is an observation in any case.

In absence of a mission statement to use as a guideline, how can the content of this research be summarized? The original objective of this dissertation did not include a mission statement that was to be used as a basis of evaluation. For review, the stated objective of this research was to find out:

How effective was the Nepal Engineering College Architecture Department in preparing graduates for the profession and further academic training during the first ten years of its existence?

A conclusion from this research would have to be that Nepal Engineering College architecture department was very successful in preparing graduates for the profession and further academic training during the first ten years of its existence. However this statement cannot be complete without first some verification and also some reservations. In the midst of many negative comments up to this point, the overall positive evaluation of the teaching in the architecture department at Nepal Engineering College can be given because of the overall positive and encouraging sentiments of most of the interviewees and how well their have done professionally and academically since graduation.

The department can be congratulated for producing graduates who have done very well in the practice of architecture and also many who have successfully gone on for further studies at universities around the world. The alumni's own perception of their ability was confirmed by the single interview with one of their employers and multiple interviews with professors of those who had gone on for further studies. The percentage of nec architecture graduates who obtained employment is very high. Also many alumni have opened their own private practices and are doing very well. Those who are working in other offices have also moved up in their respective firms and hold significant posi-

tions. Reports from educators who have directed nec architecture graduates in further studies has been very positive as to how nec alumni compare to other international students here in America and even how they compare with American students (again another area needing more expansive research). What nec graduates have accomplished is laudable and the architecture department is to receive some recognition for this fact.

However, from the very limited perspective of this research it appears that the “success” of nec architecture alumni is decreasing year by year. The 1999 batch had significantly higher percentage of architecture graduates who went on to other professions, some as far from architecture as banking. Even among those who have gone on to things other than architecture there was acknowledgement that the architecture training had been helpful as mentioned by one graduate: “But the learning process that we learned in architecture, how we prepare for few things while designing; it helped me to prepare for that subject also (something they are teaching now)”. There was also a lower level of job satisfaction with the graduates from the 1999 batch compared to the 1996 and '97 batches. One situational observation: each year Nepal graduates more and more architecture graduates; now possibly around 200 per year. When the first batch of about 24 architecture students in Nepal graduated in 2000 from Pulchowk campus, there were only 200 registered architects in all of Nepal. Now the five architecture programs in Kathmandu are graduating 200 per year. There comes to be saturation point in the marketplace. That is one reason so many graduates have moved outside of Nepal for both further studies and work opportunities.

Before I get too far off topic, it may appear from the limited data of this research that the quality of architecture education at nec is going down and not improving year by

year as would be desirable. This is not only an observation between the 1996 and 1999 batches of graduates from this research, but most significantly from the comments of all three batches of graduates who are now teaching and observing the process of architecture education and comparing what they see now with how they remember they were taught. There can be a nostalgic feeling for the education process that students went through as they look back from their present-day experiences; but I feel that these alumni are correct in their observation. From casual discussions with other faculty who were teaching during the years the graduates of this research were studying and are also teaching now, there is consensus that the students are not learning as well now.

A succinct summary statement of to Nepal Engineering College on their architecture program might be stated: “Good start, but several changes are needed to regain the academic prominence shown at the beginning”.

Surprising Similarities to Architecture Education in America

Another interesting aspect looking over the findings from this research is not how different these findings are to evaluations of architecture programs in America, but how closely the findings from research on architecture education in Nepal are similar to those in America. The countries seem so different, are vastly different economically, geographically and in socio-cultural ways. Yet students have the same type of comments about their architecture training and departmental evaluations result in similar findings (Davis & Petry, 2002). In both the United States and this research of Nepal, architecture program evaluations have found a lack of participation by professional architects in the educational process, found a need for greater variation in approaches to design, need for

increased collaborative work experiences for the students, and found need for changes in architecture curriculum (Boyer & Mitgang, 1996).

One area of concern from US architecture education evaluations is that architecture programs are quite isolated from other university academia. It has been recommended on the basis of academic evaluations in America, that architecture departments become more integrated on their university campuses both allowing their students to absorb a greater part of the university liberal education, but also for the architecture department to have a greater education role of all students on the university campus (Boyer & Mitgang, 1996). One difference in the results of this research between the architecture program at Nepal Engineering College and most architecture schools in the United States has to do with the physical integration of the architecture program to the rest of the academic institution. In America, most architecture programs are housed in a separate building and because of long hours and a focused academic program, there is minimal interaction between the architecture college (and its students) with the rest of the university (Boyer and Mitgang, 1996). Contrary to the situation at most schools of architecture in America (and at the architecture department of the Institute of Engineering in Pulchowk, Kathmandu), the architecture department in nec is physically part of the same building with all the other programs so the architecture students, both in the college building and daily on long bus ride from and to the city, are interacting with students of other academic disciplines. This integration and participation with the other college disciplines was noted by a few interviewees like participant 972 who stated, “We had exposure to a lot of things because we were with the engineering students and the others (students of other college disciplines). We especially had a better idea about the struc-

tures because we were in school with the engineers. But I can see that we did not have the other subjects like geography, world history that students get in American universities.”

The similarity of architecture education around the world in general and between America and South Asia in particular is not a totally new observation as can be seen from the following quotation by Dhiru Thadani, an architect and educator who practices in both the USA and India:

...we are struck by similarities in descriptions of architectural education given by recent architectural graduates in each of these places. Students in both worlds, enthusiastically remember the hard work and long hours. They remember the adrenaline rush of trying to get a project finished on time, and the arrogant studio critic who just did not understand their concept. The thrill and satisfaction of creating, is what drives students. They combine left and right brain thinking, simultaneously dealing with technical realities and the creation of beautiful spaces, to design places that seek to elevate the spirit and engender positive human experiences. Once bitten by the bug to create, students of architecture often cannot imagine doing anything else. On graduation, students entering the profession often find themselves unprepared for the realities facing them. (Thadani & Hetzel, 2004, p.279)

From the conclusions of this dissertation it seems that both the architectural education experience (as mentioned above by Thadani) and the evaluative thoughts of the alumni from both the East and the West have many similarities.

Application of Conclusions

My initial summary of the architecture program at Nepal Engineering College was quite positive, thus it might be inferred that this section looking at applying conclusions of the research would not be very long. However, the statement that the “architecture department was very successful in preparing graduates for the profession” was followed by the observation that “the quality of architecture education at nec is going down”. This second part of the research conclusions should be very discouraging for the college and its stakeholders. The quality of the graduates from the architecture department appears to be declining which is a trend that needs to be reversed. This situation is not going to be reversed just by the passage of time; in fact, left to itself the quality of education, like gravity, tends to drop. Are there specific steps that could help the college to regain the higher academic footing it once held? There certainly must be. Following will be a series of needed steps to apply the conclusions of this research to educational praxis at Nepal Engineering College.

Since a part of this research has covered the importance of cross-cultural sensitivity, it must be remembered that any proposed changes must be brought about in a culturally relevant way. This “culturally relevant way” must include methodology generally accepted in the Nepali culture as well as in the particular college “culture” at Nepal Engineering College. I am sure that as a foreigner I will miss the mark on many of these suggestions, particularly concerning how they might be specifically adopted. However, it is felt that these are the type of changes needed to see a resurgence of academic excellence in the department. My many years of experience at this college should give me some idea

as to the working within the college and some sensitivity to how change can be brought about.

Suggested Changes

These suggestions will be grouped thematically to simplify understanding and also help with implementation of ideas. The first area of suggested change is in faculty development. The single biggest influence in an educational institution is its teachers. This is more important than the facilities, the administration and even the quality of the intake of students (though the quality of students is also of very great importance).

Department direction and evaluation.

The first area of importance is for the architecture department to understand where they want to be and find out how they can get there. There needs to be clear Department Direction and Evaluation so that bearing can be established and progress can be monitored. This will necessitate the development of a Mission Statement for the department created through the input of all concerned so that all feel part of the process. The mission statement should enshrine the goals of the department in such a way that success can be measured. The department should remember the responsibility they have to impact all of the country of Nepal (not just the urban elite) and the fact that many of their graduates continue work and study options in a global context. There has been considerable desire from the alumni to have broader more flexible program with more student options than have been available in the past to allow for specialization in areas of interest. To keep track of progress in fulfilling the new mission statement an intentional Program

Evaluation process will have to be implemented. A regular program evaluation would not need to follow the methodology of this research, but it is understood that there would need to be a greatly increased Research Focus from within the department. As a personal step in this suggestion I plan to be involved in training architecture faculty in research methodology to increase and improve research from the department, which has been almost non-existent the last few years. This personal involvement has already begun as I am in communication with one young faculty who expanding on the research begun with this dissertation.

It is not enough to just find out information; it must be discovered how things can be changed. To follow-up on evaluative research suggested above it will be necessary to have an Evaluation Committee with the power to make changes and not just recommendations. It is very common in South Asia to investigate to find out what is wrong, but it is very rare to actually take steps to correct a problem, even when the answer is identified. Thus a committee with wisdom to understand and the authority to make decisions must be formed so that the direction of the department can continue to progress. To find how the department is progressing it will be essential to find out how the students themselves are doing both academically and in understanding of the knowledge they are gaining. Therefore it is recommended to begin a major policy to have an ongoing Evaluation of Students through their academic years and even after they graduate. This is not just an evaluation of student grades, which help determine student knowledge but does not measure how much they understand. One good way in architecture education to follow a student's real progress is through a Student Portfolio that is a visual record of student achievement. These portfolios should be evaluated at certain appointed times to evaluate

student progress and to determine suitability for advancement. Looking at these portfolios individually and collectively a faculty committee could determine personal strengths and weaknesses as well as an evaluation of an entire class. This could allow mid-course corrections or further study to strengthen particular weaknesses among a given group of students. Looking at student portfolios as students graduate can also be a means of contributing to a program evaluation as strengths and weaknesses of the department would become clear. Another asset for students would be to develop a Alumni-Student Mentoring Program where nec alumnus stays in regular contact with a student to be an encouragement and help to them. When asked during this research, there was wholehearted support for this mentoring idea from the alumni who were interviewed not just in Nepal but also those residing abroad who felt they could keep in contact with a student through the Internet. It is believed that this program would be an encouragement to the alumni as well as being a motivation to the younger students and help them to better understand the world of architecture they are studying about. To help the students further it is also recommended to begin a closer accountability within the department itself by appointing a Faculty Counselor for Each Student. This would provide a closer link to a faculty and open lines of communication to help students with specific academic problems and assist the student in course selection.

Faculty improvement program.

Besides those aspects at a department direction and evaluation level, there is the urgent need for a Faculty Improvement Program at nec. The faculty are the greatest single asset of a college and the single largest input in student learning. The college has run

a Quality Improvement Program (QIP) in the past but the results in the architecture department were limited and of short duration. From the early days of the architecture department there were several senior professor level faculty, but now has a majority of very junior faculty who need to learn and grow to expand their subject knowledge as well as to gain skills in teaching and communication. Though not always encouraged by the administration, it is recommended to strongly encourage and help the faculty to gain more Practical Architecture Design Experience both under the auspices of the college as well as on their own. The college presently has a research and consultancy division and it is recommended to expand that division and include an architecture faculty to increase extra work options for architecture faculty. Many of the young faculty have come to teaching right from graduation and they need more practical experience to have more practical knowledge to share with the students. To improve teaching skills it is recommended to begin a regular, on-going Teacher Training Program that would include periodic classroom type teaching and learning situations. Frequently teachers do not like to take on another responsibility, but interviews with some of the existing young faculty indicate that they would be willing to invest time and energy in improving their teaching skills. Related to this the college is to be congratulated for their policy of encouraging faculty to further their academic qualifications by pursuing further degrees. However, higher degrees do not always directly result in better teaching. A program focused on teaching skills could significantly help the architecture faculty. This finding of the need for additional help for faculty was also a finding in architecture education evaluations carried out in America (Boyer & Mitgang, 1996). Connected to this teacher-training concept is the recommendation to start a Faculty Mentoring Program where older faculty

would mentor younger faculty. Though this could work out naturally through personal relationships, it may get started better with some encouragement from the top. It is also suggested to begin to Require Teacher Course Reports of Goals, Objectives and Evaluations. It is difficult to see how teachers can improve if they are not consistently and intently aiming higher and working toward improvement. Many of these recommendations will be seen as more work for the teachers though the result would certainly be improved teaching and learning. To encourage teachers to be involved it is recommended to include Financial Incentives for Faculty Involvement by the teachers in each aspect of the teacher improvement program. That bonus for the teachers is to make the next suggestion easier to swallow. Also suggested to help the faculty improve is to initiate regular Teacher and Course Evaluations by the Students. Up to now this has been considered nearly heresy in Nepal. With the Guru-disciple philosophy, the guru is not expecting comments from his young disciple on what he is doing wrong! The teachers have not thought they could learn anything from the students, but I think they would be amazed at how student comments could inform and improve their teaching effectiveness.

Administrative understanding.

Recommendations up to this point have been for the architecture department but there are some administrative changes in the college that would help improve educational results that I will categorize under administrative understanding. Most of these suggestions are changes of thinking or policy that are not long or expensive programs but are actions that would greatly improve the opportunity for the architecture department to improve their teaching success. The first step is for the administration to Realize the Dif-

ference Between Civil Engineering and Architecture. To a considerable degree, many of the smaller problems between the architecture department and the administration arise from this foundational misunderstanding. To the architecture department the administration sees architecture as “civil engineering without training in roads, bridges, services, and drainage”. This focus means that the administration expects the architecture department to run like a civil engineering department and to have similar priorities. This leads to the second aspect of administrative enlightenment (from the perspective of the architecture department) and that is the administration has to Delegate More Decision-Making Responsibility to the architecture department. Importantly this would include the administration being more open with finances and letting the architecture department make more financial decisions that involve them. Without this increased independence from civil engineering control it is difficult to see how the architecture department could make some of the change that are needed to see consistent academic improvement. The next major area of administrative adjustment is expansion of Alumni Services. Though part of the responsibility for alumni should be in the architecture department itself, a broader participation by the administration would provide increased alumni interaction and support for all graduates of Nepal Engineering College not just those from the architecture department. The college’s responsibility for the students does not end when they graduate. Upon graduation students need much greater connection and assistance from the college than has been provided in the past. This was mentioned by several of the interview participants during this research. One idea that would be easy for the college to set-up because they have a computer science department, is to establish an Alumni Network or internet connection that could help alumni keep in contact with each other as well as

keeping the college informed of their progress. Something else that could be integrated with this communication network is for the college to coordinate Job Openings and Study Opportunities that would be of interest to the graduates.

Smaller suggestions.

There are some other small suggestions that resulted from this research that should be shared with the college. Some of these suggestions would help in making some of the recommendations to the architecture department listed above possible to execute. The first suggestion is to have the college open for only four full teaching days per week. There are several justifications for this suggestion that come from the data. One repeated problem mentioned by many students is the loss of time from traveling back and forth to the campus. Attending one less day per week is saving 20% of the travel time. Another repeated difficulty was typified by the comment, “The administration said there was no money for site trip visit”. Reducing class days by one per week would save transportation money and free up the college buses to be used for field trips. The college at one time met five and a half days a week and then decided to save money on transportation by doing away with the half day each week. Having one extra teaching period per day could mostly compensate for missed class time that came from cutting one day per week. This extra day available each week could be very productively utilized. The extra day would provide time for field trips, which otherwise conflict with normal teaching schedule and cause much shuffling of class scheduling. Also, teacher improvement sessions could be held on these non-teaching days (requiring many fewer buses for transportation. It would be suggested to use two days each month for teacher improvement and two days available

for field trips, in-city lectures, etc. There would be considerable financial savings by not running all the buses one day per week. This savings could go toward using the buses for field trips, a financial burden that has limited off-campus field trips in the past. This suggestion seems like a win-win situation in money savings, scheduling conflict savings, regular time for teacher training, time and money for local field trips and site visits and also provides the students more study time to complete assignments. This extra study day would compensate for the loss of study time riding on the bus the four days college does meet for regular classes.

Besides overall program evaluation, there needs to be regular process evaluations of each batch of students during their years of study to see what type of projects the students have done, what are general areas of strength and weakness and what they might be lacking. Each student should be encouraged to prepare and present a portfolio of their work, which would be an asset in these process evaluations. This process evaluation of each class should take place at a pre-determined time in their study sequence. The review should be scheduled to allow sufficient time left in their studies to correct any deficiencies in their academic program. These corrections could mean simply scheduling a certain type of design project, or a special course to fill-in perceived educational gaps. Examples could be a topical area like large complex (airport or university campus) or it could be in some aspect of architecture (presentation, writing proficiency, etc.) and then a program can be developed for rectifying that shortcoming. This may be a single course for all (like 3-D graphics or a writing class) or it may be individual projects that could be a flex-class or special project. Initiating a process evaluation of each batch could be very

significant in helping to make sure that each class and each individual is as prepared as they can be.

Another suggestions, just within the department of architecture, would be to establish a regular guest lecture program. Several students mentioned the lack of interaction with outside specialist and a planned lecture like this could be especially beneficial. It would be possible to schedule these lectures, at least sometimes, at other architecture colleges in Kathmandu and thus allow closer interaction between the different colleges and more fully utilize the guest lecture expertise. This could be of no or very little cost to the college as most potential lecturers would be very willing to share at no cost to a combined architecture school audience. The students could travel by local transport to Kathmandu venues with no cost to the college. It would be considered an honor for the different architecture schools to host these lectures and I am sure there would be no financial request on their part. This guest lecture proposal would be big educational gain at no cost to the college.

Another low-cost high benefit suggestion for the college and particularly for the architecture department is to seek the aid of alumni in helping with the architecture program. As mentioned in the analysis, there was considerable, actually 100% positive response from alumni interviewed to participate with the college in some way. This could include a mentorship program with the architecture students, speaking in the guest lecture series, hosting class field trips at their office or site of a completed or under-construction building, and even possible financial contribution to the college. These suggestions would require no financial outlay from the college and may even result in some financial

contributions from alumni besides the academic and practical input from former graduates.

One strongly recommended change by all of the alumni from the 1999 batch (new Pokhara curriculum) was to cut the existing C+ programming course. Because of the absence and need for Architecture Theory it would be easy to replace this programming course with 3 hours credit in Architecture Theory. This is not sufficient hours for full understanding of theory, but it is an easy way to begin to correct the critical absence of an understanding of architecture theory in the minds of the students.

One very simple suggestion, which I think nec is willing to do, is to renew a Memorandum of Understanding (MOU) with Ball State University. The original MOU signed in 1999 resulted in student and faculty exchanges and much good will and academic involvement on both sides. Both the College of Architecture and Planning at Ball State University and Nepal Engineering College seem favorable to re-signing this agreement and it should be completed quickly.

Another suggestion involves a simple scheduling change that would free up teacher time and enable openings in the schedule for more electives for the students. Part of this recommendation involves breaking down the conventional wisdom in Nepal that all batches need to take all classes separately as a group. Up to this point students in any one batch and in any major, take all classes together. That means that a limited number of options are available because a specified number of students are required to justify a teacher's time in teaching a course. Thus, the architecture syllabus contains time slots for a few elective classes. However, the students have to decide what elective they want to take and then that particular elective can be given. If the batch is large there may be an

option for two electives if there are a sufficient number of students choose each elective. It would be possible to run electives in such a way that students from either 3rd year, 4th year or 5th year could all be in the same elective. Thus with a greater number of students available more electives could be scheduled and students could begin to focus on desired specializations. Thus an elective in Appropriate Technology for Low-Cost Housing in Nepal could have students from several different batches in the same class. This may seem normal to academicians in the United States, but it would be revolutionary in colleges in Nepal.

In order to free up some teacher availability for elective courses, it is also suggested to consider joining different batches together in teaching some major required courses. For example, the courses History of Western Architecture and History of Eastern Architecture are not related nor are either of them a prerequisite for the other. Thus, instead of teaching one batch Western History and another batch Eastern History, both batches could take Western History together and then take Eastern History together thus saving the teaching of each course each year. With very large batches of students (like the 50 students in the incoming 2008 batch) it may not be practical to join with another class. However, joining courses like this could save much teacher time in required courses and open more options for electives to provide students a broader, more personalized educational opportunity.

Another area mentioned by a few of the participants is appropriate technology. I was surprised at the number of alumni who felt they did not know enough about low-technology uses like earth blocks, bamboo, etc. One graduate has an ongoing project working with a non-governmental organization to develop proto-typical very-low cost

residential designs for different regions of Nepal. This alumnus felt very unprepared for this type of work but was fascinated with the potential for helping so many people in Nepal. Combined with the repeated comments about the lack of practical, hands-on learning in the architecture program, another suggestion is to have a full or at least partial semester program taking students to live in a rural village, find out from the local people what is needed, and then design and actually build that structure. This type of exposure would enable the students to both have exposure to appropriate technology as well as gain understanding of the needs and possibilities in contributing to the well being of the majority of the population of their country.

One last suggestion that would provide time in the academic schedule for opportunities like the rural studio mentioned above, is to adjust the year schedule to leave several weeks free for a special one-month “short” semester. This “extra” semester could be used for a concentrated course or a special course taught by an outside expert who may be able to come for that one month but may not be able to come for an entire semester. The time could also be used for a rural living-learning-building experience mentioned above or for a prolonged field trip like to India or even South-East Asia. The civil engineers already have a similar type of time where they take about 3 weeks for a survey camp outside of the Kathmandu Valley. This type of extra, short semester would provide a natural opportunity for the survey camp as well as other opportunities for other departments in Nepal Engineering College. If there were no outside visits needed for a particular department, like Computer Science, a short extra semester would provide the opportunity for on-the-job work experience or an additional class taught by an outside expert. Many of the possibilities mentioned in this paragraph already happen, but to make

them happen during existing semesters means extensive scheduling complications. A recurring “short semester” could make these special opportunities easier to create without the added scheduling burdens.

Opportunities for Further Research

Though this research did find new information it also brought out more potential areas for research than were resolved by this research itself.

Educational Related Research

There is need for further research to correlate the relationship and quantify the results comparing the response of an interviewee’s current job satisfaction when recalling past educational experiences. Work has been done by other researchers (Delaney, 1997) on the topic of the correlation between current job satisfaction and personal evaluation of educational experience. However, even in her work, Anne Marie Delaney conceded that additional research was needed to verify and quantify these relationships (1997, p. 263). This dissertation research project was much too small a number and too narrow an employment focus to provide accurate extrapolation and reliability for a broader context.

Another interesting area for research highlighted by this study is to investigate the relationship between faculty experience and student satisfaction with their teachers. This study found a considerable difference in the opinion of students about their teachers in the different classes; especially between the two batches who had senior teachers and the one batch the lost the senior teachers during their years of study and finished with a majority of junior teachers instructing them. The very limited nature of this research pre-

cludes making broader generalizations about any correlation between faculty experience and student satisfaction with their teachers.

Architecture Education Related Research

This research draws attention to the international nature of architecture and multiple pedagogical opportunities. Much of architecture is culturally influenced and architects can learn much by being exposed to architecture (or architecture education) in other cultures. Frank Lloyd Wright was greatly influenced by the architecture of Japan through his time spent there designing and building the Imperial Hotel in Tokyo. Further study and research of architecture and architecture education in a global context cannot help but produce valuable insights for architecture pedagogy around the world. The results of this research show many similarities to evaluations of architecture programs in America and it would be interesting to do further research on the correlation between evaluation findings in different countries. The international nature of architecture may contribute to a similarity of architectural education culture around the world. Large national level evaluations like the Boyer report can aid in comparisons with architectural schools in America (Boyer & Mitgang, 1996).

Cross-Cultural Related Research

There are numerous potential cross-culture related research topics discovered through this research. It would be interesting for similar research to be done in a locality separately by both a cross-cultural and a local researcher to see the differences that appear. Major differences are likely to appear even if quantitative research methods are

employed because of the type of questions that are likely to be created, the epistemological foundations of those who analyze the data, etc. Indeed it is possible for someone outside of a culture to notice things in a culture that someone living inside does not notice; however, it is also likely that someone from outside is going to miss a significant amount of information without at least a measure of cultural understanding. My own position in this research as an outsider and an insider; from another culture but considerably acculturated to the society I was researching, was important in how the research was accomplished.

One area where some research has been accomplished but I feel more research can be done is in measuring teaching effectiveness cross-culturally. Finding a way of measuring effectiveness across cultures would be beneficial to me personally as I seek to train architecture professionals outside of the United States. This type of measurement includes at least three aspects of a teacher's skills and abilities:

- **Affective Qualities** (ability to establish rapport with culturally different students, empathy, dedication, enthusiasm, and high expectations)
- **Craft Skills** (ability to organize, discipline, knowledge and teaching ability)
- **Political Skills** (ability to gain trust of local community) (Kleinfeld, 1983, p. 2).

I am interested to consider these parameters in my own teaching situation but I am sure that more research will be needed. Kleinfeld's research was conducted with teachers coming from the lower 48 states to teach among the Eskimo children so the extent of the research was limited.

Another area of research of personal interest to me involves continuing to relate cross-cultural issues to expand my research in Nepal in collaboration with some Nepali

colleagues who will be able to sharpen my cultural observations. Besides just Nepali colleagues, there are some architecture teachers from other countries who are interested in teaching in Nepal and I am interested in their collaboration in this continuing cross-cultural research opportunity. There is one Korean colleague specifically who has taught at Nepal Engineering College and would be an excellent addition to a cross-cultural research team of this type. As one cross-cultural researcher explains: “Collaborative research benefits cross-cultural studies greatly. If the research team includes people with different cultural backgrounds, the barriers discussed above can be reduced”. Collaborating with Nepali researchers as well as those from other countries it should be possible to improve the accuracy and results in cross-cultural work of this type. This same previously mentioned researcher continues, “Working together, researchers with different cultural backgrounds are more likely to question each other’s assumptions and find creative approaches. Collaboration should thus yield more meaningful findings” (Jameson, 1994, p. 40). I am interested to discover what additional findings we can have by conducting research collaboratively with those from several different cultural backgrounds.

Nepal Related Research

This research has illustrated to me the vast research potential in Nepal. Almost all research in Nepal is conducted by outsiders or is done by Nepalis coordinated, funded and supervised by outsiders. The vast majority of literature related to research in Nepal discovered in research for this dissertation project had western, or certainly non-Nepali names listed as the authors. Many cross-cultural researchers have come to Nepal and done research concerning the Nepali people themselves and not on the usefulness or pos-

sible ineffectiveness of those from other nationalities coming to Nepal. With the number of internationals serving in Nepal in various capacities from the US Peace Corps through volunteer organizations as well as national and United Nations related groups, the number of foreigners coming to teach and aid Nepal is significant. Though my own cross-cultural teaching experience in Nepal was beneficial to me as well as to my students and other examples were mentioned in this text, I am also aware of unsuccessful cross-cultural teaching experiences in the country. One case in point: the civil engineering department at Nepal Engineering College hired an American to come to teach and it was not a successful experience for either the teacher himself or for his students. This individual came with considerable professional expertise but no actual previous teaching experience. That meant that this person was going through the struggles of learning to teach while going through cross-cultural adjustment as well. The students could not understand the southern U.S. accent of the teacher and he could not adjust to or help his students overcome some of the common plagiarism issues rampant in Nepali higher education. This teacher also had considerable adjustment problems to daily living hardships in Nepal. What had been proposed as a two semester teaching contract was reduced to one semester to the satisfaction of both the students and the teacher. As outsiders are so interested to come into Nepal and research the Nepali people, it may be advantageous for the Nepali people to return the favor and research those who come to their country.

nec Related Research

Even though this research was focused on Nepal Engineering College, the conclusion of this research effort leaves more research to do for this institution than was accom-

plished by this dissertation process. The following bullet points will explain areas for continuing or future research:

- Educational objectives and curricula of other architectural education institutions (Europe, the United States, India and other institutions in Nepal)—This could be easy to do with an Internet search of posted architecture syllabi posted on university websites. Understanding of goals and objectives of other architectural institutions would aid in developing a coherent mission statement and specific academic goals.
- Educational pedagogy in other architectural education institutions (the United States and other institutions in Nepal)—For this research an effort was not made to make a comparison between Nepal and other institutions around the world. However, there are certainly pedagogical lessons that can be learned by looking at the methodology of other schools of architecture.
- Areas of change and adjustment in other architectural education institutions (the United States, India and other institutions in Nepal)—Besides looking at what other institutions are doing or how they are doing it, there is also benefit to see what type of changes have been deemed necessary by these schools. Seeing how other educational bodies are able to change and adapt, could help Nepal Engineering College in making needed changes.
- This research has demonstrated an important need for ongoing research on more recent graduating classes to further refine strengths/weaknesses of the academic program in architecture at Nepal Engineering College and to more accurately pro-

pose curricular changes. Nepali teachers may do this more efficiently rather than semi-outsiders like myself.

- One specific area of research with alumni was brought out strongly by one interviewee. Additional and focused research is needed to verify and quantify the extent to which alumni are lacking self-confidence in their professional interactions.
- It could be significant to do follow-up interviews with several of the same original interviewees to see if additional thoughts have come to mind as they have had time to specifically consider their academic training in the light of their professional experience.
- Group research in place of or in addition to interviews of individual alumni. These can have a social networking benefit to the alumni beyond the research advantages of a group interview process. The group dynamics of this type of research are an area that would take further study on my part and I suspect a significant learning curve.
- Extensive interviews of nec alumni employers in Nepal to see how nec graduates compare to those from other programs in Nepal, India, and from Nepalis who have studied architecture abroad and returned to Nepal. Also research of employers of nec architecture graduates working abroad with other employees in their offices would help to see how nec compares with other architecture programs globally.
- Alternate different research methodologies as a broader bases for making long-term evaluations—Interview students one year, concentrate on teacher interviews another year, interview alumni one year, get feedback from professional architects

in another year. This multi-pronged strategy over a several year period could help to utilize the strengths of and not be limited by the weaknesses of any particular research method.

- It would also be interesting for nec to begin tracking incoming students to compare their academic aptitude to their academic progress and then professional progress after graduation. This could help the department select incoming students who would become better students and better professionals. The department could look closely at incoming students' academic history (science or technical background), drawing or computer skills, etc. and seeing how those kinds of students succeed.
- One interview was conducted with a husband and wife team, both of whom were graduates from the architecture program at nec. This double interview illustrated to me the potential in small group interviews as the comments of one person can spark a memory in the mind of the other. Two interviewing together can produce more information than the interviewing of each one separately. There is the other side of group dynamics as well where the comments of one-person influence, intimidate or direct the comments of others who may not want to disagree with the first speaker. I think to continue this research on a more long-term basis I may consider a combination of personal and small group interviews to gain from the strengths of both methods.

Contributions of this Research to Academia

Academia in America

This research project certainly adds to the body of knowledge on qualitative research of alumni for academic program evaluation. This is not an exclusive research topic, but will add to the current body of knowledge.

A contribution of this research project can be seen in the area of cross-cultural research and evaluation of cross-cultural teaching effectiveness. There are also cross-cultural aspects as a researcher from one culture is interviewing those from another culture. There may not be many clearly visible lessons on cross-cultural research, but one that the reader should take away is that the better acculturated the researcher is to the target culture, the more accurate will be their research methodology as well as the accuracy of their findings.

This research should also contribute to better understanding of the cultural/academic background of South Asian students coming to USA, particularly those from the country of Nepal. Students from South Asia constitute one of the largest blocks of international students coming to America for further studies. Even though many of them are quite proficient in English, there are several academic and cultural barriers that are covered in this text which can aid receiving institutions in better evaluating prospective students and in orienting new South Asian students for studies here in America.

Academia in Nepal

Even greater than the contribution to Academia in America, this research has potential for adding to the body of academic knowledge in Nepal. The dissertation will be

presented in its entirety in Nepal, though different aspects of the writing may be more useful there than others. Academic in Nepal may benefit from this research in the following area:

- Concept of academic program evaluation—Academic program evaluation is totally unknown in the engineering programs in Nepal. With over a 40-year history this is a deplorable situation. The act of conducting and presenting this research will be a revelation to the engineering education community. Even the limited conversations I have had with senior educators indicate this type of research will be enthusiastically embraced by academia in Nepal.
- Idea of qualitative research for program evaluation—Though the practice of program evaluation is virtually unknown in engineering education in Nepal, at least the concept of program evaluation is known. However, there does not appear to be experience of utilizing qualitative research methodology for conducting program evaluations. The engineering disciplines especially, are looking for solid, numerical, factual evidence and quantitative investigations are the only type common among engineers in Nepal, as may be expected. However, this research demonstrates that there is much that can be gained utilizing qualitatively based research methodology.
- Concept of academic course evaluation—The concept of academic course evaluation is not totally unknown in Nepal but it is very rare. Most teachers to some sort of evaluation in their minds, but there is very rarely a concerted effort to really look into the relative effectiveness of a particular course. As has been mentioned under the Faculty Improvement Program, the concept of “Teacher and Course

Evaluations by the Students” can be very beneficial though they have not even been considered as a viable idea up to now. Besides being open to observations and comments from the students, teachers could greatly benefit from a self-evaluation of their own teaching techniques, continual updating of their syllabus and a general attitude of being a reflective learner and not just a dispenser of information.

- Cross-cultural aspects in teaching, planning, evaluation—Having taught in the architecture departments at two educational institutions and visited the others conducting research for this dissertation I know that there has been no consideration of cross-cultural aspects in architecture education in Nepal. If a serious cross-cultural evaluation was done I am sure that there would be changes in both the curriculum and the teaching and training of architects in Nepal.
- Aspects of teacher mentoring & teacher evaluation—There has been a history of some type of teacher evaluation at all educational institutions because teachers frequently will see a change in their official academic designation: from junior professor to assistant professor for example. However, teacher evaluation is rarely linked with how to help teachers improve their teaching effectiveness but simply rewarding past accomplishments. The concept of teacher mentoring is also not an idea that is totally unheard of in Nepal but it has not been actively encouraged or used to its fullest potential. Some senior teachers naturally take younger teachers under their wing, but a systematic and intentional mentoring program across any academic department would certainly return visible and cost-effective results.

What Did I Learn?

This dissertation research process has been a greater learning opportunity for me than any single class or project I have ever worked on. A total explanation of what I have learned would likely be longer than this text itself but a few major lessons will suffice.

Having completed this research I have learned a research methodology of qualitative research and analysis that should prove extremely helpful for me in the years ahead as I return to Nepal. Many of the methods implemented in this research were topics of study during the last few years, but actually working on the research strategy, interview and analysis process and tying it all together with the writing of this dissertation has been a very rewarding educational endeavor and helped to make theory understood in a practical way.

Going through the process of the interviews I was struck by the power of scholarly stimulation that occurred when thinking minds concentrated on a topic together. The intellectual synergy was very refreshing and enlightening. I can see that contact with the graduates will be an important part of keeping up with what is most important to teach existing students.

Somewhat related to the synergy I noticed in my own discussions with participants, the one group interview with a husband and wife team of graduates revealed the potential energy in a small group of multiple respondents or a group discussion atmosphere. I can see that these would be beneficial brainstorming opportunities as more can be accomplished with energetic small group dynamics than by individual interviews with each person separately.

Though the concept appeared late in the research process, I certainly gained much by investigating the importance and value of cross-cultural understanding. There is so much of one's epistemological position that is culturally influenced that this topic cannot be left out of any research that involves participants from multiple cultural backgrounds. The Nepali people have great cultural adaptability possibly developed because of the number of cultural influences in their country through many generations serving as a crossroads between the sub-continent of India and eastern cultures of Tibet and China. In the coming years I will certainly be more sensitive and aware of cultural differences and how those can have a positive as well as negative impact on learning.

Certainly one surprising aspect for me in the results of this research is how much the findings of evaluation of an architecture program in Nepal is similar to the results of evaluations conducted in America. The national cultures and socio-economic situations are so different at a macro level that this level of similarity seems unusual. However, the small upper class of the Nepali population that is representative of the vast majority of our students is not so very different economically from the middle class in the United States.

Even though there is, to some degree, a level of similarity in findings from architecture program evaluations here in America and these findings from Nepal there is still a very large growing socio-cultural gap between the two countries. With the increase in technology, a poorer country like Nepal will not be able to keep up or catch up, but as Thomas Friedman contends, these kind of countries will fall the weak will further and further behind the more developed world (2005).

What Will I Do With What I Have Learned?

Involvement in this research project has certainly set me on a course to continue program evaluation in Nepal in the coming years. This type of evaluation is desperately needed both as an example of the research process and also as an indication of the importance of program evaluation itself.

As is evident in the Application section of this chapter, there are multiple suggestions for changes at Nepal Engineering College that I would like to begin as soon as I return to Kathmandu. What I plan to do with what I have learned is to see that the need for change is understood and that changes are implemented.

Because of the paucity of this type of research in Nepal, the writing of a book related to this project is now under consideration. Though the exact text of this dissertation is not appropriate for wide-scale distribution, the concept of program evaluation, the methods of qualitative research and the importance of cross-cultural examination are all topics relevant for publication in Nepal. All of the suggestions for change at Nepal Engineering College contained in this dissertation would indicate a very busy time schedule for me and make contemplation of future publication questionable. But is not a full time schedule almost always the enemy of publication?

Because of the importance of Architecture Theory in a well-rounded architecture education and the lack of this topic in the present architecture curriculum at Nepal Engineering College, I have already started one of the new faculty on a small research project to investigate how theory is handled in other curriculum. In addition I have worked through in an independent study class, an outline for a discussion of architecture theory through a study of current Asian architects. This type of class, which would likely be

given as an elective course, would help to address two areas of weakness in the nec architecture syllabus: understanding of current Asian architects and architectural theory. So there is every intent to slide the topic of Architectural Theory into the nec curriculum one way or another.

There was much data related to my own personal teaching style and effectiveness that was not covered in the analysis of this research project because it was considered outside of the context of this dissertation project. However, for my own personal growth and development as an educator, I plan to search through the data again investigate what graduates had to say about my own teaching style and methods and what can be improved from what the graduates have discussed.

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APPENDIX 1: — EXEMPT REVIEW PROTOCOL

SECTION 1— TITLE, PURPOSE OF THE STUDY, AND RATIONALE

1. Title: Nepal Engineering College Architecture Program Case Study

2. Purpose of the study: The purpose of this study is to conduct a case study of the effectiveness of first ten years of teaching of the Department of Architecture of the privately funded Nepal Engineering College near Kathmandu Nepal. The develop of this research methodology is to help in program evaluation to determine what has worked, what has not worked, what areas of the curriculum or instruction need improvement so that these findings can be applied to a revised curriculum and pedagogy which should result in an improved professional architecture program.

3. Rationale: This study is being undertaken as research for my doctoral dissertation in the Educational Studies Department under the supervision of Dr. Joseph Armstrong as partial fulfillment for the requirements of Doctor of Education (Ed.D.) degree in Adult Higher and Community Education. From 1995 to 2002 I was involved in the development of the curriculum and setting up the Department of Architecture at Nepal Engineering College (nec) as its first long-term full-time employee. Having returned to the United States in 2002 to pursue my own further studies, I have been interested to evaluate the efficacy of the architecture program and see how it could be improved. Program evaluation is very rare in Nepal and to date, no studies have been published of educational program evaluation of an engineering program in the country of Nepal. This research should have special relevance for the Architecture program of Nepal Engineering College as well as value in Architecture Education, Assessment and how it may be conducted, and for the whole area of how Professional Education and program evaluation may be completed in other professional degrees. This research is to utilize a qualitative research methodology which is virtually unknown in educational research in engineering professions in the country of Nepal. Alumni from the architecture program of Nepal Engineering College will be interviewed to determine their perception of their undergraduate training and how effectively they feel they were prepared for the professional world or the further studies they pursued after graduation. Some of their supervisors, either senior architecture professionals or college professors, will also be interviewed as a source of triangulation for observations of the alumni and further insight into strength and weakness of the architecture program.

SECTION 2 — DESCRIPTION OF SUBJECT POPULATION

1. Number of subjects: For this case study a total of about fourteen (14) in-depth personal interviews are to be conducted. The primary interviewees would be graduates of the Architecture program of nec and the remaining would be supervisors of these alumni. This list would include about six (6) alumni in Nepal who are working in a

professional architectural capacity and about two (2) of their supervisors or employers. About four (4) alumni from the nec program who are living in the United States and about two (2) of their supervisors would complete the list of interviewees.

2. Describe the subject population: The major subject population would be the alumni of the first five years of graduates from the architecture program of Nepal Engineering College. This includes a subject field of about 105 alumni. In these first five years, two of the graduating classes were very small (five and eight students) and the remaining three classes of graduates were all over twenty-five students each. To retain confidentiality, only student graduates from the three large classes will be interviewed. One graduate was an Indian national who had been living with his family in Nepal for many years and all the remaining graduates were Nepali nationals.

Only graduates who have continued in the architecture profession either in advanced studies in architecture, teaching or professional work in an architect's office will be part of the research.

A few supervisors (either teachers of those alumni who have gone on for further studies, or employers in architecture offices) will also be interviewed to give another picture as well as to be a source of triangulation with the answers from alumni.

Thus some alumni and supervisor interviews are to take place in Nepal (about eight interviews) and a smaller number here in the United States. Four of the projected interviewees in America will be Nepali graduates of the nec program and the remaining will be American teachers or senior architects who have supervised nec graduates in their architecture office.

SECTION 3 — SUBJECT RECRUITMENT

1. Describe the method of subject recruitment: To select those alumni from the 105 potential graduates a stratified purposeful sampling will be used. There will be graduates from different classes (the 2001, 2002 and 2004 graduating classes with more than 25 students in each class). There will also be a selection from those with higher, middle and lower academic standing during their student years. There will be a proportional number of students from each represented year of graduation and from each level of academic proficiency during their college years. There will also be a selection of participants by geographical location because some of the participants will be alumni who are studying or working in the United States to see how well prepared they were for work and study outside of Nepal. Having selected several potential students, they will be contacted in person, by phone or by email by me to see if they are willing to participate in the research study. Because I have a very good relationship with nearly all of the graduates, a high response rate is anticipated. Even with a low response rate, only about ten students of the one hundred graduates are needed for this interview process so there will be plenty of students to choose from. In the initial contact, graduates will be informed of the nature of the research, the high level of confidentiality, the lack of any financial remuneration for participation in the research, and the possible time commitment required for the interview and possible follow-up interview process. Contact information will be obtained through existing contacts with students I already have, contact information I receive

through other students, and addresses I obtain from Nepal Engineering College alumni information services.

From graduates who are willing, I will request permission from them to interview their supervisor as part of this research process. The graduates will be requested to contact their supervisor initially to ascertain their willingness to participate in the interview process. When a graduate confirms a supervisor's willingness, I will contact the supervisor with more complete information regarding the interview process to determine if the supervisor is still willing to participate.

SECTION 4 — METHODS AND PROCEDURES

1. Describe the methods and procedures to be used:

For this case study research it is proposed to utilize a qualitative research methodology. Selected people will be interviewed individually; the interviews will be taped and later used to check my theme notes and reflections from each interview. Open ended questions will be used to illicit reflections from subjects regarding their academic training and how well they feel their training has prepared them for the profession or advanced study positions.

In the process of setting up each interview, the subjects will be given an outline or a copy of the Written Consent Forms for them to review before meeting. They will also be informed of the topic of the research so they can be thinking about the general direction of the interview and the process of reflection and consideration can begin. The location for each interview will be chosen in discussion with the participant to find a place that would be comfortable and conducive to a personal interview process. This may be at the subject's place of work, a coffee shop, etc. At the beginning of the interview session, the Verbal Script Explanation of the Written Consent Form will be read to the subject to insure they are fully aware of the parameters, risks, benefits, etc. of the research process before they sign the release form. After two copies of the form has been signed and one given to the participant, the interview would begin with an open ended question. The alumni would be asked about their recollections of their academic training and their supervisors would be asked a general question about how well the nec graduates have performed for them. Guiding and clarification questions would be asked to obtain as much information from the participant without asking leading questions that would overly direct the informant's opinion or direction of thought in their answers.

Directly after each interview review notes of the interview will be written down to retain as much in fact as well as in nuanced understanding from each discussion. Transcription and analysis will begin as soon after the interviews as feasible to retain as much information from memory as well as written and transcribed observations and reflections.

SECTION 5 — ANONYMITY / CONFIDENTIALITY OF DATA

1. Describe how data will be collected and stored: Data will be recorded from each interview with a portable recorder. Observation notes will also be written down or spoken into the recorder. As soon as possible after each interview observational notes will be written down and the recording will be transcribed. If a recording cannot be tran-

scribed immediately, it will be copied in a password protected file on my computer with a back-up copy on an external hard drive also password protected. All notes and observations will also be transcribed into the computer and saved in password protected Word files. All notes not initially transcribed will be stored in a locked container in my office. There will also be some documentation data like Architecture curriculum from different universities that is not particularly sensitive, but all data will remain in the locked file in my office. Thus all data will either be physically locked or password protected on my computer or a back-up hard drive. This data will remain locked in my office and password protected on my computer until the completion of my studies at Ball State University. After my graduation, all physical data will be destroyed. The security of the data should help to retain confidentiality for the participants.

Because alumni subjects will be taken only from larger classes of graduates, confidentiality of the subjects should be attainable. Subjects will not be named in my writing though there may be generalizations like, “a graduate from a certain year working at a large architectural office in Nepal,” or “a graduate from a certain year doing further studies in the United States.” The supervisors may be identified as “a supervising architect in a small architecture office in Kathmandu,” or “a professor in a large U.S. university.” Because of the number of graduates in these circumstances, an individual should not be able to be identified, especially by the people who would be reading the dissertation results of this research.

SECTION 6 — SUBJECT INCENTIVES / INDUCEMENTS TO PARTICIPATE

1. Describe any incentive/inducements to participate that will be offered to the subject:

There will be no specific or financial inducement for the participants in this research. The culture in Nepal is much more oriented to interpersonal relationships than the more individually oriented American culture. Most all of the students from the architecture program in Nepal will be very interested to discuss with me over the 1½ to 2 hour time frame of these interviews. In fact, I will likely need to interact in many additional discussions with former students outside of this official interview process because they would feel “left out” if I did not talk with them while I was back in Nepal. Because some of these interviews may take place in a coffee shop or similar establishment, it would be culturally expected of me to offer to pay for the refreshments during the interview process. However, it would also be culturally expected that the participants would insist on paying since I would be a guest in their country. Thus, there is no plan for any financial or other incentive or inducement to participate in this research project.

2. Describe any risk/benefits to participants and how that could affect the subjects:

There are some benefits and only minimal risks for the participants of this study. There could be some risk to individuals if they had a very difficult or traumatic experience during their college years that this type of interview could draw to the surface in their thinking. Because I know the students and many of the experiences that they had, I could minimize the potential risk in this area by either eliminating alumni with known traumatic experiences or asking specifically regarding their feelings about those experi-

ences even before the interview process. For example, one student had his father pass away during the three week exam period which caused him to miss some of the exams and fail those courses. Another student was in line to receive the top engineering graduate in Nepal award until the last semester of his graduating year. In cases like these, I could discuss these events before the interview to see if there are still hurtful issues that remain that could cause personal distress in an interview situation. There is also some risk in interviewing supervisors of alumni in that the interview process could cause reflection and reconsideration by the supervisor of the work and ability of the alumni and put that graduate in jeopardy as far as their job and further employment with that company. This risk will be minimized by going through the alumni to contact the employer. If an alumni is apprehensive about his position in the eyes of his supervisor, the alumni would likely be hesitant to have the supervisor participate in the interview process. I will make sure that alumni are very positive about my interviewing their supervisor before proceeding with that aspect of the research.

The interview process could also provide some benefits. Though the interview process is not likely to make the participant better off, there are benefits to society in the understanding of the architecture education process and likely improvements to that process through this research. Interviewees could be part of the process of improving architecture education in their country. The participants may also gain a greater understanding of their own educational learning process as they reflect and review their education and consider how it might be made better. Supervisors may obtain a better knowledge of the nec alumni as they reflect on their participation in their company or educational institution and could also be part of the process to produce better architecture graduates in the future.

APPENDIX 2: CONSENT LETTER FROM NEPAL ENGINEERING COLLEGE

Support from Nepal Engineering College in Kathmandu for this research:

Nepal Engineering College has always been very positive about my involvement with their institution. Though I have had some informal interaction with them, the following emails from their principal, Prof. Deepak Bhattarai, and academic vice-principal, Mr. Rukmanath Paudel, show their support for my research proposal:

Dear Donn,

It is nice to read your mail. We will be more than willing to help your research. This should be of great significance to *nec* as well.

Please let me know if you need this letter in a college writing pad or a simple mail like this would do. If a formal letter is required please send the postal address where the letter is to be delivered.

Deepak Bhattarai.

Dear Donn Sir,

We are very happy and fortunate that you are undertaking research on the effectiveness of the Architecture program here at Nepal Engineering College (*nec*). You had earlier assisted us in the preparation of the syllabus for the Architecture program and it is serendipitous that you will also be assessing its effectiveness. In fact we were considering revising the current syllabus in light of the feedbacks from some of the passed out students, employer and faculty member. The findings of your research could provide a very strong basis for the course revision we had been contemplating. Therefore, we fully endorse the research you are planning to undertake here at *nec*. We have no objection to your interviewing our current as well as passed out graduates as part of your research work. We also welcome the idea that you could be undertaking similar research of other programs at our college.

Looking forward to meeting you soon in Nepal.

With warm regards,
Rukmanath Paudel
Vice Principal, Nepal Engineering College
Changunarayan, Bhaktapur
Nepal

APPENDIX 3: INTERVIEW PROTOCOL

As a researcher working through the jurisdiction of Ball State University, I understand the ethical and legal responsibilities for protecting the rights and welfare of human research subjects and for complying with all applicable provisions of University policy.

Because all interviewees will be college graduates or their professional supervisors, all subjects will be over the age of 18, fully mature and in full control of their mental faculties so there is no need for parental or guardian permission to participate in this research.

I will obtain approval in writing from each subject for this research prior to the interview process in circumstances that provide the prospective subject sufficient opportunity to consider and decide freely whether or not to participate. Most all subjects will receive an email or printed copy of the wording on the Written Consent Form so they can read and understand that information before having to consider signing the form in my presence. I will explain to subjects, prior to their decision about whether or not to participate, the objectives of this research, the procedures to be followed and the potential risks and benefits. I will not use individuals as subjects unless I am satisfied that they fully understand the consequences of participation and freely consent to participate in the research. I will make clear in writing and verbally to the subjects that they are free to withdraw from active participation in the research at any time. There are a sufficient number of potential subjects that there will not be a shortage of potential research personnel. Subjects who indicate a desire to withdraw shall be allowed to do so promptly and without penalty or loss. There will be no payment to the subjects for participation in this study or inducement of any kind.

There will not be standardized questions or even a specific question format. In-depth interview method is planned with the graduates using first a convergent interview approach trying to keep the interviewee talking and sharing their own opinions not overly directed by my questions. If needed, the initial approach would be followed by a guided conversation approach with open-ended questions to illicit responses from the students' own understanding of their learning experiences. I plan to take key-word and observational notes but not complete notes during the interview to maximize eye contact and observations. A similar methodology is planned with the educational officials and employers. After transcribing the interview and initial analysis, a follow-up interview may be needed to clarify some areas or a discussion with the participant regarding my initial analysis of their interview. These follow-up interviews can be used as member checking where the participant is asked to verify my analysis of their interview.

Each interview will take place at the location and time preferred by the participant so that they will feel at ease and able to think and answer questions most readily. Because of the long-standing relationship this interviewer has with each participant, each interview will begin with a clarifying statement that this interview time is set aside from our normal friendly relationship in order to accomplish certain academic goals. The participants will be encouraged to answer openly and honestly without undue consideration of our preexisting relationship. Next, a verbal introduction to the signed consent form will be given to explain the form, the reason it is needed, and to ask for any questions before asking for the participant's signature. (A copy of the verbal explanation to the consent form is found in Appendix 5 and a copy of the Written Consent form is found in Appendix 4.)

After the consent form has been signed, I will ask permission for the interview session to be audio taped by means of a small MP3 recorder. If permission is granted, the recorder will be started. The interview will begin opening questions like the Initial Questions found in Appendix 2 as a starting point for discussion. Besides taping the interview to obtain reference for a word-by-word transcript of the interview, notes will be taken noting verbal cues and body language that further explains or emphasizes participant explanations. Each interview is expected to last about one to one and a half hours.

After the completion of each interview, the researcher will try to make as quick an exit as is culturally feasible to attempt to promptly write down all additional observations and specific comments that can be remembered from the interview. The next activity will be to transcribe the interview from the MP3 recording.

This process will be followed with each of the interview participants. It is likely that through the interview discussions other questions and situations will be brought to light. These further questions would need to be asked of the different interviewees and thus a short follow-up interview would be scheduled with each participant as needed.

The follow-up interviews would begin with a verbal review of the research guidelines, re-explanation of informed consent with a question as to whether the participant is still interested in continuing the interview process with this follow-up interview. The follow-up interview is expected to last no more than thirty minutes.

The researcher would be sensitive to participant conditions during and after the interview process to see if there are any signs of discomfort, anxiety, stress, etc. In the event of a stressful situation for any of the participants, they would be directed to appropriate medical practitioners and the incident would be reported to the IRB before continuing with the interview process. Participants will also be given contact information for the Ball State University Institutional Review Board with name, address, phone number and email to report any conflicts or concerns.

At the end of the data collection the research data would be analyzed to determine if there are trends and repeated situations that would provide guidelines for research con-

clusions. The result of this research will be my doctoral dissertation. A final report summary would be sent to the IRB. The interview process is projected to begin soon after receiving approval from the IRB (provisionally summer of 2007) and the final dissertation should be completed during the 2008 academic year. If the research, analysis and writing of the dissertation extends beyond the summer of 2008, an extension of IRB approval will be sought.

APPENDIX 4: SURVEY INSTRUMENT

This research is an investigation into the educational proficiency of the architecture program of Nepal Engineering College in Kathamdu, Nepal. Because of the qualitative research methodology and the convergent interview approach, there are no specific interview questions. However, there are guidelines for the questioning direction and sample initial questions will be given here.

SAMPLE INITIAL QUESTIONS TO ASK IN THE INTERVIEW PROCESS:

1. Describe your architecture education experience at Nepal Engineering College and how well you feel that prepared you for the job position you entered upon graduation.

Follow-up Question(s): Are there specific examples or instances of the areas that you are mentioning? Were these examples that were particular to you or do you feel they are more generally applicable to all students of architecture in Nepal?

2. What areas of your architecture education at **nec** were most helpful to you in your work as an architecture professional?

Follow-up Question(s): Were these areas that you are mentioning have more to do with the curriculum of study, the method of teaching or to specific teachers or learning situations in particular?

3. What areas of your architecture education at **nec** were inadequate or did not sufficiently prepare you for your work as an architecture professional?

Follow-up Question(s): Were these areas you mention specifically difficult or insufficient for you or do you feel they were areas that needed work for all the architecture students?

4. What suggested changes would you have to the architecture program at Nepal Engineering College to better prepare students for the profession of architecture as you see it?

Follow-up Question: Do you feel that structural changes to the curriculum or method of teaching or examination system would create a better educational environment or preparing architecture graduates?

APPENDIX 5: WRITTEN CONSENT FORM: ALUMNI

Alumni Participant Consent Form

Nepal Engineering College Architecture Program Case Study

This study is being done for partial fulfillment of dissertation research requirements for doctoral studies through the Educational Studies Department of the Teacher's College of Ball State University.

The purpose of this study is to investigate the results of the first ten years of the Architecture Program of Nepal Engineering College (**nec**) by interviewing alumni and their supervisors. This research is to result in a case study of the **nec** Architecture Program to reveal its strengths and weaknesses and areas for improvement and praise. For this project you will be asked to recall your architectural training at nec and your observations on how well prepared you were for your professional work / further studies after graduation. The initial interview will take between one and two hours. There may be need for a follow-up interview and/or a checking of the manuscript of the interview within the following two weeks to see if what has been recorded is truly your feelings and recollections. In some cases you may be requested to review my preliminary analysis of our interview within the next month to assure that my understanding of your comments represents your true feelings.

Every measure will be taken to ensure confidentiality. All data will be maintained as confidential. Data, both written and recorded, will be stored in a locked filing cabinet in my office. As soon as possible all files, written and recorded, will be saved in password protected files and all non-protected files will be destroyed. During the course of the research investigation, a duplicate copy of data notes will be kept in a locked filing cabinet in my home office to guard against possible loss or damage of the data before the completion of the project and submission of the dissertation. After completion of my university degree, all stored data and notes will be destroyed.

The foreseeable risks or ill effects from participating in this study are minimal. Should you have any questions or concerns regarding this interview procedure, you may contact me directly, or you may contact the Ball State University Coordinator of Research Compliance, Melanie L. Morris (1)765-285-5070 [Fax (1)765-285-1624] or by email at <mlmorris@bsu.edu>

One benefit you may gain from your participation in this study may be a better understanding of your academic background its impact on your professional life and/or further academic studies.

Your participation in this study is completely voluntary and you are free to withdraw from the study at anytime for any reason without penalty or prejudice from me or anyone else. Please feel free to ask me any questions before signing this Informed Consent form and beginning the study, and at any time during the study.

I, _____, agree to participate in this research project entitled, "Nepal Engineering College Architecture Program Case Study." I have had the study explained to me and my questions have been answered to my satisfaction. I have read the description of this project and give my consent to participate. I understand that I will receive a copy of this informed consent form to keep for future reference.

Participant's Signature

Date

Principal Investigator's Signature

Faculty Supervisor:

Donn Treese, Graduate Student
Department of Educational Studies
Ball State University
Muncie, IN 47306
Telephone: (1)765-282-2890
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Dr. Joseph Armstrong
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APPENDIX 6: WRITTEN CONSENT FORM: SUPERVISOR

Supervisor Participant Consent Form

Nepal Engineering College Architecture Program Case Study

This study is being done for partial fulfillment of dissertation research requirements for doctoral studies through the Educational Studies Department of the Teacher's College of Ball State University.

The purpose of this study is to investigate the results of the first ten years of the Architecture Program of Nepal Engineering College (**nec**) by interviewing alumni and their supervisors. This research is to result in a case study of the **nec** Architecture Program to reveal its strengths and weaknesses and areas for improvement and praise. For this project you will be asked to recall your evaluation of the architectural training of the Nepal Engineering Architecture graduate whom you have taught or supervised. The initial interview will take between one-half and one hour. There may be need for a follow-up interview and/or a checking of the manuscript of the interview within the following two weeks to see that what has been recorded is truly your feelings and recollections.

Every measure will be taken to ensure confidentiality. All data will be maintained as confidential. Data, both written and recorded, will be stored in a locked filing cabinet in my office. As soon as possible all files, written and recorded, will be saved in password protected files and all non-protected files will be destroyed. During the course of the research investigation, a duplicate copy of data notes will be kept in a locked filing cabinet in my home office to guard against possible loss or damage of the data before the completion of the project and submission of the dissertation. After completion of my university degree, all stored data and notes will be destroyed.

The foreseeable risks or ill effects from participating in this study are minimal. Should you have any questions or concerns regarding this interview procedure, you may contact me directly, or you may contact the Ball State University Coordinator of Research Compliance, Melanie L. Morris (1)765-285-5070 [Fax (1)765-285-1624] or by email at <mlmorris@bsu.edu>

One benefit you may gain from your participation in this study may be a better understanding of your younger employees / students and you will be participating in the improvement of architecture teaching in Nepal.

Your participation in this study is completely voluntary and you are free to withdraw from the study at anytime for any reason without penalty or prejudice from me or anyone else. Please feel free to ask me any questions before signing the Informed Consent form and beginning the study, and at any time during the study.

I, _____, agree to participate in this research project entitled, "Nepal Engineering College Architecture Program Case Study." I have had the study explained to me and my questions have been answered to my satisfaction. I have read the description of this project and give my consent to participate. I understand that I will receive a copy of this informed consent form to keep for future reference.

Participant's Signature

Date

Principal Investigator's Signature

Faculty Supervisor:

Donn Treese, Graduate Student
Department of Educational Studies
Ball State University
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APPENDIX 7: VERBAL SCRIPT EXPLANATION OF CONSENT FORM

All alumni interviewees will be given the following verbal explanation of the written consent form, a summary of the topic of the investigation, and be asked if they have any questions regarding the written consent form before signing the document.

“You realize that I am your former professor and that we have known each other for many years. However, for means of this interview, I would like you to consider me as interviewer and not as a friend or former teacher. Any information that you share here will remain confidential and will not be shared with any of your friends, former classmates, **nec** personnel or your employer or institution. You should also feel free to share honestly without undue regard for particular people or situations that I may be familiar with at Nepal Engineering College. I will not be taking this information back to Nepal Engineering College in any way that would jeopardize your identity or your association with any Nepali or American institution.

“This written consent form is an official document giving verification that you agree to the following interview(s) and that you also agree for this information to be used in written documentation for my doctoral dissertation research. You will not be singled out as an individual and your name and identity will remain confidential. As is stated in the written consent form, the specific location of this interview will not be mentioned in any written form that would enable you to be traced individually.

“By signing this paper you give initial consent to this interview and documentation process, but you can withdraw at any time if you change your mind later, and your information will not be used. Your participation in this study is completely voluntary and you are free to withdraw from the study at anytime for any reason without penalty or prejudice from me or anyone else. You will not receive any payment or reward for participation in this interview process. Please feel free to ask me any questions you have before signing the document and beginning the study. You may also ask questions about this written consent document or the interview process at a later time during or after the interview process. You will sign two copies of the document and you will keep one copy for your personal records.

“Do you have any questions about the consent form document or the interview(s)?

“Are you willing to sign the consent form at this time?

“Do you agree for this interview to be recorded on this small voice recorder for later transcription?”

APPENDIX 8: VERBAL SCRIPT EXPLANATION OF CONSENT FORM

All supervisor interviewees will be given the following verbal explanation of the written consent form, a summary of the topic of the investigation, and be asked if they have any questions regarding the written consent form before signing the document.

“You realize that I am a former professor of a Nepal Engineering College Architecture graduate who is or has been under your supervision for work or studies. For means of this interview, I would like you to consider me only as interviewer. Any information that you share here will remain confidential and will not be shared with the **nec** graduate, any other employees or personnel in your organization or institution or with Nepal Engineering College. You should also feel free to share honestly without undue regard for particular people or situations either in this organization or at Nepal Engineering College. I will not be taking this information back to Nepal Engineering College or letting the information out in any way that would jeopardize your identity or your association with any Nepali or American institution.

“This written consent form is an official document giving verification that you agree to the following interview(s) and that you also agree for this information to be used in written documentation for my doctoral dissertation research. You will not be singled out as an individual and your name and identity will remain confidential. As is stated in the written consent form, the specific location of this interview will not be mentioned in any written form that would enable you to be traced individually.

“By signing this paper you give initial consent to this interview and documentation process, but you can withdraw at any time if you change your mind later, and your information will not be used. Your participation in this study is completely voluntary and you are free to withdraw from the study at anytime for any reason without penalty or prejudice from me or anyone else. You will not receive any payment or reward for participation in this interview process. Please feel free to ask me any questions you have before signing the document and beginning the study. You may also ask questions about this written consent document or the interview process at a later time during or after the interview process. You will sign two copies of the document and you will keep one copy for your personal records.

“Do you have any questions about the consent form document or the interview(s)?

“Are you willing to sign the consent form at this time?

“Do you agree for this interview to be recorded on this small voice recorder for later transcription?”