PROBLEMS, POLITICS, AND POSSIBILITIES OF A

PROGRESSIVE APPROACH TO SERVICE

LEARNING IN A COMMUNITY

COLLEGE: A CASE STUDY

By

KEVIN L. BURR

Bachelor of Science
Brigham Young University
Provo, Utah
1982

Master of Education in Education
University of Nevada
Las Vegas, Nevada
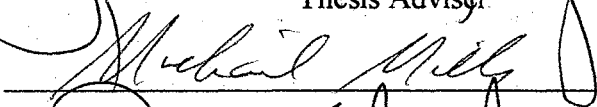1991

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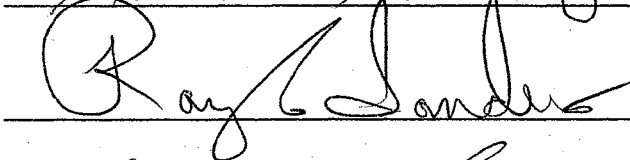
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Thesis Adviser

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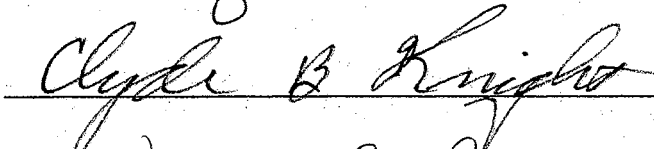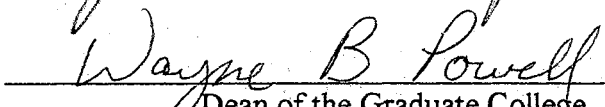Dean of the Graduate College

ii

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TABLE OF CONTENTS

Chapter

CHAPTER I

INTRODUCTION

Background of the Problem

With the creation of Joliet College in Illinois around the turn of the twentieth

century, the two-year college began (Cohen & Brower, 1989). From the beginning, the

community college has been in a constant state of evolution. As society's education needs

changed, direction shifted toward what has become known as the community college

concept (Deegan & Tillery, 1985). The development of a community college mission and

the community college's relationship with its constituents has also been a part of the

continued evolutionary process of the community college concept. The comprehensive

mission of the community college began to reflect five traditional parts: a) Career

education and preparation of students for an occupation, b) Compensatory education and

the enhancement through remedial studies, c) Community education and reaching out with

extended services, d) Collegiate function and new directions for the liberal arts, and e)

General education and the development of an integrated curriculum (Deegan & Tillery,

1985; Cohen & Brower, 1987). Duea (1981) indicated that a critical issue for the future

of community colleges was the changing mission and purpose of these institutions. As the

community college dealt with a changing mission and purpose, it faced the challenge of

1

trying to create a pathway for the fulfillment of its educational objectives and developing

an effective instrument for the increased learning and preparation of students. Alfred and

Smydra (1985) stated that, in the future, community colleges will be faced with many

problems that will affect their status as self-governing institutions of higher education.

These problems will put pressure on community college faculty and administration to

evaluate the utility of academic programs and service to local communities, states, and

society as a whole.

As its evolution continued, community college practitioners realized that teaching

and learning methodologies must also evolve to meet the learning needs of community

college students (Feldman, 1985). Feldman further indicated that community colleges

would find their roles toward education expanded or altered depending on how they

related to new developments and changes. Zwerling (1976) stated that community

colleges needed alternatives to education and learning methodologies that would enable

students to rise within society in ways that would increase the knowledge and productivity

of society and reflect the true potential of students.

However, Cohen and Brower (1989) said that community colleges still have not

embraced alternative learning methodologies.

> It is reasonable to assume that in an institution dedicated since its inception to
> 'good teaching,' new instructional forms will be tried. However, despite the
> spread of reproducible media, traditional methods of instruction still flourish.
> Visitors to a campus might be shown mathematics laboratories, the media
> production facilities, and computer-assisted instructional programs. But on the
> way to those installations, they will pass dozens of classrooms with instructors
> lecturing and conducting discussions just as they and their predecessors have been
> doing for decades (p. 155).

John Dewey (1900), who is known as the father of progressive education, conducted many studies about how people learn. He felt that there was much more to learning than what was at the time considered the traditional approach, he stated that:

> Men have had to work in order to live. In and through their work they have mastered nature, they have protected and enriched the conditions of their own life, they have awakened to the sense of their own powers - have been led to invent, to plan, and to rejoice in the acquisition of skill (p. 84).

Dewey introduced an alternative methodology to learning. He believed that people could learn more effectively as they experienced and became aware of the life that was around them. He called this alternative "Progressive Education." Dewey tried to cultivate awarenesses through experience in his Chicago Laboratory School (Lauderdale, 1981). Much of Dewey's philosophy focused upon learning from the environment.

Progressive learning concepts could provide the basis for employment training potential which supports one of the emphases of the community college mission. However, progressive learning concepts did not adhere to traditional education circles in Dewey's time. Theorists such as Snedden, Prosser, and Allen believed that vocational education should be focused and directed only toward specific areas of vocational concentration and incorporated a Tayloristic social efficiency approach. Dewey's theories have only recently been seriously reconsidered for dominant practice.

Today, increasingly, many of Dewey's progressive learning principles are being tried in circles of education. Speaking of this generation, Joseph Featherstone (1991, p. xiii) stated that "certain basic ideas and approaches to progressive education are already becoming fashionable in many circles." Addressing specifically community colleges, Zwerling (1976) indicated a need for progressive alternatives to learning methods. He

stated that by putting the curriculum to work for students in egalitarian ways and by building an experiential education program to release potential community colleges can better serve notions of personal development and equality. Further, Duckworth (1991) expressed that the current climate in community colleges was to oversimplify curriculum and called for a railing against that climate. She indicated that progressive concepts can take steps toward the alleviation of oversimplified curriculum and learning.

A current progressive approach to learning is service learning. Gamson (1995, p. 4) declared that service learning "has hit higher education big-time." Kahne and Westheimer (1996) stated for example that:

> students in a service learning project might analyze and monitor the composition of nearby swamplands or produce an oral history of their community. They might work with the homeless or initiate a cross-age tutoring project. In addition to helping those they serve, such service learning activities seek to promote students' self-esteem, to develop higher-order thinking skills, to make use of multiple abilities, and to provide authentic learning experiences -- all goals of current curriculum reform efforts (p. 593).

Gamson (1995) further indicated that people involved in service learning are paying close attention on how faculty can evaluate learning from experiential activities and integrate service into the curriculum.

<p align="center">Statement of the Problem</p>

John Dewey provided the framework for what is called progressive learning which incorporates awareness based upon experience learning for occupational preparation as well as adult citizenship. The literature indicates that community colleges, who continue to train in the traditional sense for job entry, are not taking advantage of progressive principles and their application toward current vocational learning strategies. The

literature also calls for alternatives to learning methodologies in community colleges that would incorporate learning by experiences and awarenesses. Evidence suggests a progressive approach to community college education could provide an effective alternative for learning. The challenge and problem for this study then involved the development of a clear understanding of the problems, possibilities, and politics involved in the effective administration and facilitation of a progressive approach to community college education. This study was directed at determining if progressive education, which incorporates experience, awareness, and service learning, could provide an effective alternative learning methodology in community colleges.

Research Objectives

1.   To explore what possibilities progressive education, using experiential learning based on awareness and service learning, could have upon community college students as an alternative to learning.

2.   To identify what problems might be encountered in the use of progressive principles for learning, incorporating experiential/awareness ideals and service learning, for community college students.

3.   To identify what political issues that might be raised as they relate to traditional education, community involvement, and student success with the application of progressive education based upon experiential/awareness ideals and service learning.

Purpose of the Research

The purpose of this research was to observe, in the context of a one case study, progressive education that incorporates the principles of experiential learning based upon awareness and service learning for community college students. While the literature discussed the possible contribution of this learning philosophy in the community college context, there was little data available regarding the specific problems, possibilities, and politics of transforming this philosophical approach into practice.

Assumptions

The following assumptions were made regarding the study:

1. The nature of this study was to explore a progressive learning methodology in a community college environment using experiential, exploratory, and awareness as motivations and techniques for learning and incorporating service learning. These learning tools, as indicated by the literature, have been utilized in many pedagogical situations and have proven to be effective for students' learning applications. However, these approaches, according to the literature, have not been actively adopted or mainstreamed into community college learning methodologies.

2. Progressive principles, using experiences, exploration, and awareness, and the incorporation of service learning would be effective as a learning strategy for typical situations in the community college environment.

3. The student participants, involved in the study, were honest in their responses during interviews, focus group sessions, and in personal journal entries.

4. The city of Guthrie, Oklahoma was interested in receiving the proposed architectural service in order to enhance their existing downtown business area.

5. Data collection from personal interviews, focus group sessions, personal observation, students personal journal entries, and survey instruments contributed to a form of triangulation.

6. Corroboration, triangulation, peer examination, and member checks would contribute to the credibility of the study.

Limitations

The following limitations were considered regarding the study:

1. The literature indicated that community colleges typically are highly bureaucratic organizations deeply set into a structure of traditional administration and instruction that would be difficult to change. Immediate limitations to the study would be the problems and politics associated with breaking the mold of traditionalism in a community college environment in order to incorporate a truly progressive learning environment. Progressive learning principles are a completely different approach to learning than historically has been the case for community colleges. This approach will place difficulty and pressure upon the structure of the traditional community college to make changes in learning methodologies. Given the highly bureaucratic organizational structure adhered to by most community colleges, difficulty could be experienced in the administration, facilitation, and adaptation of these changes.

2. A possible limitation to this study was that a smaller group (8) of participants was used. A larger group might have produced more telling information, however this is unknown, and may warrant more research, please see recommendations for further research in Chapter V.

3. Being restricted to an eight week period, the short time duration of the study was a limiting factor. Progressive education depends upon the availability of time for the students to experience, become aware, reflect, interact, grapple and solve problems in order to grow and gain knowledge. The eight week time period could have been a limiting factor to the study.

Definition of Terms

The following are definitions of terms relevant to the study:

1. Active learning - indicates that students are involved in activities where they are thinking and doing such as problem solving, higher order of thinking, application, analysis, synthesis, or evaluation. Active learning requires students to do things and think about what they are doing (Bonwell & Eison, 1991).

2. Awareness learning - is the learning that occurs as new concepts become known through awareness brought through experience (Chickering, 1977).

3. Community college - a public funded two-year degree granting institution of higher education with a comprehensive five part mission (Deegan & Tillery, 1985).

4. Experiential learning - refers to learning opportunities which rely upon realistic experiences. From those experiences students must be able to stand back and observe and reflect on the significance; they must be able to develop logic, a theory, and a

conceptual framework that gives some order to the observations; and they must be able to use those concepts to make decisions, to solve problems, and to take action (Chickering, 1977).

5.   Progressive education - as described by Lillian Weber: "the ideas ... after all, are about person, about difference, about continuity, about human   striving to make both sense of the world and impact upon it, about potentiality and the conditions of life that nurture or suppress the flowering of potentiality, about the conditions that allow the recognition and emergence of ideas, and about the professional, theoretical, and instructional context of schooling. Inherent . . . is a broad acceptance for all persons as active learners, capable of intelligent active efforts to survive" (Dropkin & Tobier, 1976, p. 5).

6.   Qualitative research - a generic term for investigative methodologies described as ethnographic, naturalistic, anthropologic, field, or participant observer research (Jacob, 1988).

7.   Service learning - a method through which citizenship, academic subjects, skills, and values are taught. It involves active learning -- drawing lessons from the experience of performing service work (Kinsley, 1994).

<div align="center">Summary</div>

From the inception of the community college concept the literature indicates that there has been a constant state of evolution for its purpose, structure, and place in higher education which included the way the community college addressed how to teach and how

the students learned. Currently the community college, through its stages of evolution, has incorporated a mission that attempts to support a comprehensive five part purpose.

Despite the changing needs of society, the community college has nestled into a traditional approach for learning that has not seen any drastic change from its beginning which limits the fulfillment of its mission.

The literature supports a progressive approach as an effective method of learning. Several research projects, including those administered by John Dewey, have illustrated that learning methodologies which are progressively driven are more effective for students. Progressive education including service learning concepts are contributing to the development of current trends in education today.

Thus, a problem exists between the correlation of research and that of typical practice for learning in community colleges. Progressive principles for education using experiential and awareness techniques and the incorporation of service learning are not being effectively or consistently applied in the community college environment; therefore, only limited knowledge exists as to its potential as a learning application for community colleges. The purpose of this study was to explore progressive learning strategies incorporating service learning while presenting specific experimental data as to the problems, politics, and possibilities involved in their application to the community college.

CHAPTER II

REVIEW OF RELATED LITERATURE

AND RESEARCH

Introduction

Through a review of literature and research, this chapter introduces areas of

significance related to the proposed study. This review has been broken up into the

following section titles which represent six major areas pertaining to this study: historical

review of the community college and its mission, progressive education, service learning,

other related literature, qualitative research, and a summary.

Historical Review of the Community

College and its Mission

Phases of the Community College

Deegan and Tillery (1985, p. 3) stated in regards to the inception of the two-year

college of higher education that "The beginnings of this uniquely American institution

were humble. There were even doubts about its survival." With the awarding of the first

Associate degree at the University of Chicago in 1900 and the establishment of a junior

college in Joliet, Illinois in 1901, the community college movement began. Deegan and

Tillery (1985) further stated that the community college then evolved through five

successive generations. Today there is evidence of the community college emerging into a

sixth generation.

Generation one spanned from 1900-1930 and was considered to be an extension of

High School that encouraged broader post-secondary education for the public while

allowing the universities to concentrate on advanced studies. Deegan and Tillery (1985)

stated that William Rainey Harper, then president of the University of Chicago circa 1900,

was the first to use the name of a "junior college." Harper, along with a few other

university presidents, urged high schools to offer postgraduate courses. "Harper

anticipated the large number of students who would neither seek nor be encouraged to

pursue the B.A. degree: 'students not fitted by nature could stop naturally and honorably

at the end of the sophomore year'" (Deegan & Tillery, 1985, p. 5).

Generation two was dubbed the "Junior College" era and went from 1930-1950.

Generation two began with 259 two year schools and ended with 299. During this stage

of evolution, the two-year college became more clearly identified as a viable option to

higher education and developed a mission. For the first time since its inception the goal of

equal opportunity for postsecondary education expanded to include mature adults as well

as younger students. The mission for public two-year colleges, which became doctrine,

was defined as: terminal education, general education, career orientation and guidance,

lower-division preparation for transfer, adult education, and removal of matriculation

deficiencies (Deegan & Tillery, 1985).

The third generation from about 1950-1970 was an age of "phenomenal growth"

(Carnegie Commission on Higher Education, 1970, p. 3). Deegan and Tillery (1985,

p. 12) stated:

> This assessment at the close of the third generation indicates the scope and
> importance of twenty years of growth and transformation of the American two-
> year college. The leap from one-half million to two million students was
> unparalleled, as was the spread of colleges across the country.

During this time the transformation from the junior college to the community college took

place and a different emphasis toward serving the community emerged. The third

generation became known as the community college era. The community college concept

greatly expanded to the mission of the junior college but did not anticipate the identity

crisis being created for the next generation.

The fourth generation was identified as the comprehensive community college era.

The most significant period of time during to this generation was between 1970 to the mid

1980s. Deegan and Tillery (1985, p. 17) said of this era;

> It was difficult to adopt an appropriate name for a period that ended with
> confusion about the community college's mission. We considered using Gleazer's
> phrase, the 'community college' or our 'community learning center' to designate
> the institutions of this period. However, we believe a less expansive designation is
> more realistic, thus the 'comprehensive community college.

The fourth generation was a transitionary era in the evolution of the community college

which were evidenced by turmoil and loss of direction for significant focus. Deegan and

Tillery (1985, p. 16) stated that;

> There were trends in community college affairs during this generation that (1) were
> never fully realized, (2) added to confusion about the mission of the colleges, and
> finally (3) led to reform as the colleges entered their fifth generation. Thus, an
> ideology about the role of the community college (emerged) in the 1980s that
> arouse(d) state and university leaders to charge the community colleges with
> neglect of their traditional responsibilities in favor of what might best be called

community education. It (was) not just national advocates who (sought) to shape the new ideology. In fact, certain policies and practices of many community colleges contributed to the identity crisis. However, as in all periods, individual colleges (were) not as much alike as the literature might suggest. Some leaders and colleges, for example, responded enthusiastically to the call by the president of the American Association of Community Colleges to define the role of the institution as the shaping of society, but others did not.

"As this generation ended, institutions were not emphasizing community over college; nor were they prepared to abandon educational services to their communities" (Deegan & Tillery, 1985, p. 23). In essence, the end of the fourth generation found the concept of community colleges still in a dilemma over mission and program balance. The fourth generation ended without a clear mission leaving the fifth generation with the challenge of defining its mission.

Generation five was faced with the challenge of aligning roles in order to resolve the mission dilemma of community colleges, evaluate the quality and outcomes of their programs, and plan for the future. There is no specific name which identifies generation five, but it spanned a period of time ranging from the mid 1980s to the mid 1990s. This era concentrated on meeting community education needs while facing concerns in economic drawbacks and societal disillusionment toward what had evolved as the community college philosophy. "As community colleges move farther into the next (or sixth) generation, there is still widespread ambiguity about the mission of the comprehensive community college" (Deegan & Tillery, 1985, p. 21). Issues such as fiscal deficiencies, lower enrollments, fragmentation and division, cultural separations, and racial tension increases are evident and will play a major part in redefining the future directions for the community college (American Association of Community and Junior Colleges [AACJC], 1988).

From its beginning the mission of the community college has evolved comprehensively into five parts. The community college's role has expanded dramatically since its creation. Between 1965 and 1975 total enrollment figures grew by 240 percent. In recent years, however, growth has slowed. Community colleges emerging into the sixth generation are experiencing *challenges* in defining their role and mission.

The Evolving Mission of the Community College

Because community colleges have evolved into a distinctive academic culture, they are difficult to explain to outsiders or people familiar only to traditional college life (McGrath & Spear, 1991). The AACJC (1988, p. 6) indicated that "community colleges, more than at any other time in their history, must define with greater clarity and sophistication, their distinctive mission . . . But how should the new mission be defined?" This is the real question. Cross (1985, p. 34) echoed this philosophy when she stated, "It is not easy to define the purpose and mission of community colleges today . . . once the doors have been opened, however, and those previously unserved students are in attendance, what is the goal?"

There is a distinct lack of direction for what the mission and goals will be in the future for community colleges. Cohen and Brawer (1989, p. 24) addressed future directions of the community college as "Access to what? Should community colleges educate for further studies, or should they be the capstone for graded education? Can they be both?" It seems that even the authorities do not know where the mission, direction, and role of the community college should be going.

Speaking to future directions of the community college, Dale F. Campbell (1996)

identified areas where the community college might grow in the next twenty years.

Campbell indicated that the focus for the future of community colleges will be on building

"Learning Communities." He stated that community colleges, which have historically

been known as teaching institutions, should now move to a new paradigm of putting

learning first. The "Learning Community" would provide opportunities to enhance

knowledge for anyone, any where, any place, and any time. The learning community

concept assumes that courses will be taught, or knowledge would be dispersed, through

technology bases such as Internet or other interactive modes of instruction and be

available to whomever would desire it. It is conceivable under Campbell's philosophy that

people in our society could practically gain a full college education in the comfort of their

own homes by accessing it from their own television interactively. The technology for this

exists today and only needs further development for it to become reality. Much of the

information given by Campbell was reinforced by 1996 conference topics of the League

for Innovation in the Community College, "Beyond 2000: Visioning the future of

Community Colleges." Campbell said, "I believe that community colleges of the future

will maintain their commitment to access and quality. The defining questions for

community colleges in the future will be how they define their community -- whether it be

locally, state/regionally, or globally and the strategic alliances they form (p. 5)." He also

discussed the potential of a Global Community College that will cut across traditional state

and community service boundaries. A global community college concept is

understandable especially given the possibilities of courses being offered over Internet, by

distance learning methods, interactive television concepts, etc.. Where would traditional

boundaries for education be set? Through enhanced technology the experiential aspects of education will be proliferated and opportunities to partnership with business and industry will be accentuated. "Virtual" learning will enable students to *realistically* experience aspects of a job and therefore access true career training without actually being in the context of the job. Experiential learning incorporating virtual technology will assume a different and futuristic role. Students will soon be able to experience situations that would normally be part of a typical work day in an assimilated environment using virtual technology.

Technological issues, societal changes, changing community needs, and the changing role of the business of education will all play an important role in the continuing evolution of the mission of the community college in the near future. With such diverse and expanding needs for education in today's society, the sixth generation could prove to be the most significant era as the community college strives to promote its validity and establish its future.

Progressive Education

History

Much of the progressive education ideas of the twenty-first century were introduced by John Dewey who earned his doctorate in philosophy from John Hopkins University. Dewey, who grew up in rural Vermont, acquired a desire to research alternatives to learning after moving to the University of Chicago and experiencing the vast differences between the extremely poor working in industrialized Chicago factories

and the very rich who seemed to benefit from this labor pool. Dewey believed that immigration, industrialization, urbanization, and occupational specialization created a swiftly changing and complex society that tended to fragment rather than unify experience and to alienate people rather than integrate them into productive social arrangements. From this philosophy Dewey advocated a radical departure from the traditional formal studies in order to integrate people into society (Lauderdale, 1981).

This philosophy was not entirely new however. Dewey's philosophy was undoubtedly influenced by his background in philosophy and pedagogy as he studied the works of James, Pierce, and other noted pragmatists who seemed to support his beliefs on education. Early American philosophers such as William Penn and Benjamin Franklin professed attitudes toward a more progressive approach to learning. Licht (1992) stated that Benjamin Franklin championed useful learning and criticized traditional Latin grammar school education. James stated in his Essay - "A World of Pure Experience" that "experience is the sole and ultimate reality . . . a process, and no point of view can ever be the last one." Dewey's concepts developed as he studied and worked his little laboratory school through the University of Chicago to see what experience in real life applications could do for children. He worked mostly with practical and applicable learning experiential situations, most notably gardening. He found astonishing results demonstrated through the remarkable knowledge acquired by his participants. Even though each of them had learned differently than their peers, all had found effective learning applications still the same (Lauderdale, 1981). Hence, John Dewey hit upon the first designated progressive learning environment. His role earned him the title of the Father of Progressive Education.

Current Progressive Education

Joseph Featherstone (1991, p. xiii), in an effort to sum up the perceived directions

for progressive education today stated:

> Intellectually, certain basic ideas and approaches linked to progressive education
> are already becoming fashionable in many university and foundation circles. One
> straw in a rising wind is the 'Curriculum Congress,' held in the fall of 1990 by the
> Educational Commission of the States and CHART, an ambitious collection of
> Rockefeller-supported curriculum projects. A variety of mainstream groups --
> everyone prominent in curriculum development participated -- reviewed recent
> projects in the humanities. They issued a draft manifesto which included among
> other progressive-sounding statements the following (emphasis theirs): Higher
> expectation standards for all students, not just the college bound; . . . more
> heterogenous grouping of students and less ability tracking; . . . more
> responsiveness to the diverse needs of an increasingly diverse student body; . . .
> more active learning. This is news.

> One quote keeps ringing in my mind as I think about the struggle and the qualities
> we need to build something sustained and lasting. It is from a dead radical who's
> ideas come alive again from time to time -- John Dewey. Summing up his own
> career, he wrote, 'Forty years spent in the wilderness is not a bad fate -- unless of
> course on mistakes the wilderness for the promised land.'

The current status of progressive education is still relatively unknown. It is

known, however, that past practices were effective in their applications. Lauderdale

(1981) studied three schools who actively practiced the principles of progressive

education as explained by Dewey. In conclusion he stated:

> There are any number of lessons to be learned from the faculties of these three
> schools. One of the most important was not so much with their efforts on behalf
> of the students but with the possibilities they revealed for teachers. It is impossible
> to read their books and articles, to peruse their lesson plans and reports, or to
> interview them without capturing their sense of excitement as they undertook their
> various experiments. The extra work, the specter of failure, and the attacks from
> critics were all easily offset by the daily challenges of knowing what they were
> doing was right for (students). In their attempts to help others, they were
> themselves richly rewarded.

The challenge for progressive education today in the post-secondary setting is to portray itself as a viable option for learning. The concept of progressive education as indicated by the literature has not clearly emerged into the post-secondary arena, however, the possibilities for that to happen are still somewhat unknown.

Learner Centered

Many of the principles thought to be radical in early progressive education have become conventional wisdom in contemporary educational thought. Although practices in the early movement of progressive education varied, commitments to progressive principles were firm. Students were free to participate in decisions that affected them, to plan their own learning activities, and to be free in the performance of their work. Programs were highly individualized, and relations between students and teachers were informal. A cooperative rather than a competitive atmosphere prevailed (Lauderdale, 1981).

Learning that is centered around the learner has strong implications to progressive principles. Many of the definitions of learner centered learning follow closely initial Deweyian philosophies. For example, Coombs (1976) identified three characteristics of learner centered learning which reflect many of the principles incorporated in this study:

1. The atmosphere should facilitate the exploration of meaning. Learners must feel safe and accepted. They need to understand both the risks and rewards of seeking new knowledge and understanding. The activity must provide for involvement, interaction, and socialization, along with a business-like approach to getting the job done.

2. Learners must be given frequent opportunities to confront new information and experiences in the search for meaning. However, these opportunities need to be provided in ways that allow students to do more than just receive information. Students must be allowed to confront new challenges using their past experience without the dominance of a teacher/giver of information.

3. New meaning should be acquired through the process of personal discovery. The methods used to encourage such personal discovery must be highly individualized and adapted to the learner's own style and pace for learning.

Through learning that is centered around the learner, awareness and experience become the focus or catalyst for learning. Progressive education as approached by Dewey relied heavily upon learning which was motivated and cultivated by the learner. The learner centered learning concept is a major part of progressive education.

Learning Outside of Classroom Walls

Aronstein and Olsen (1974, p. 37) said:

In order to provide a full educative experience for youth, we can no longer limit teaching/learning situations to the school. If we seek to develop values and attitudes for our children toward their life roles, their careers, and their perception of society, we must develop new avenues of approach. We feel that outside-of-school experiences are as important as in-school experiences and that teachers must be willing to explore new pathways into the community through such approaches as the community service project.

One of the major strengths of progressive education is the possibility of gaining learning experiences which are not affiliated with the traditional classroom. Niemann (1996) indicated that traditional schools cover many of the important basics but play a relatively small role in the overall learning experience. A conventional education will not

provide all the information necessary to carry one through a working lifetime. Gregson

(1995) stated that the German model for apprenticeship prepared German youths to enter

the job market as effective workers because of the apprentiship learning possibilities

outside of the classroom whereas their U.S. counterparts were not nearly as prepared.

In an outside of the classroom learning experience in Canada one student stated

that this experience;

> has let me get to know other people more than I would in a normal classroom . . .
> (It) has built new character in each one of us but it has brought out the one that
> was hidden inside. In times when we were challenged in a situation, in a crisis or
> even when we were feeling tired and a little bit silly, we could see what each other
> was like in a real situation. And it's not something where you can hide behind
> your other friends . . . We need you right now, to do your part (Horwood, 1994,
> pp. 90).

The aspects of working in real life situations outside of the traditional classroom are

important to the nature of this study. The opportunity for students to experience these

learning possibilities cannot be realized in traditional settings.

Social/Education Reform

Current research findings and trends on the effects of progressive education on

learners have reestablished the relevancy of progressive education foundations but

encouraged the redirection of social educational reform. As Maxine Greene indicated

(1993, p. 18), "Progressive education is and will be education for reflective practice and

for wide-awakedness and for social concern. It will be carving out wider and wider spaces

for freedom and the bite of possibility. Its relevance, like the common ground, continues

to lie ahead." Vito Perrone (1991) stated that progressivism establishes the goal of

getting learners as close as possible to their upper limits of learning potentialities. The

upper limits of learning are aspects of great interest to this study.

Chickering (1977, p. 12) also indicated a social reconsideration to higher

educational practices. He stated that:

> Pressures for technical and professional training run head on into social problems
> that call for a more knowledgeable, sophisticated, and complex citizenry. Financial
> agencies sharpen questions of purpose, effectiveness, and accountability. Under
> these conditions more interest in experiential learning is logistical and imperative.

Progressive education as a concept while not a new philosophy varies drastically

from traditional learning methods. The literature calls for a reform from the traditional

approach to learning. This study incorporates progressive principles to learning in

community college education based upon a call for reform.

Experiential Learning

Aristotle said, "For all the things we have to learn, before we can do them, we

learn by doing them" (Denise, Harris, & Thomas, 1988, p. 3). A major focus of

progressive education is learning based on experiences. The literature indicates that many

students in fact learn cognitive skills more effectively when the subject is taught in the

context of real world problems connected to career options. Denise, Harris and Thomas

(1989, p. 7) explained that experiential education is often contrasted with theoretical

education which deals with abstract concepts whereas experiential education involves the

learner in concrete experiences. They further stated that:

> Theoretical learning has for a long time dominated concepts of formal schooling.
> While formal education tends to take place in classrooms, experiential education
> most often takes place outside the classroom . . . students in experiential
> education programs take on new experiences featuring significant tasks with real

outcomes and concrete learning achievements. These programs emphasize
learning by doing with associated reflection.

Chickering (1977) indicated that learning must be tested in action in order for learners to

realize its potential and gain its fullness. Dewey would agree. He felt that experiential

learning gave students the opportunity for personal and social growth. Dewey stated

(1938, p. 40) that

> A primary responsibility of educators is that they not only be aware of the general
> principle of the shaping of the actual experience by environing conditions, but that
> they also recognize in the concrete what surroundings are conducive to having
> experiences that lead to growth. Above all, they should know how to utilize the
> surroundings, physical and social, that exist so as to extract from them all that they
> have to contribute to building up experiences as worthwhile.

Gregson (1995) indicated that if educators would embrace such democratic

principles professed by Dewey, learners would gain a deeper understanding of the world

of work and also how they could contribute to expanded work possibilities and therefore

becoming an effective influence upon the work environment. Paulo Freire also criticized

the traditional concepts of teacher-students relationships. Eyford (1989, p. 29) quoting

Freire stated that in traditional education instead of introducing the student to the real

world teachers would talk about it by summarizing the vital and complex nature of reality

into static, predictable, and compartmentalized units. Into relatively empty and receptive

minds, the teacher pours the distilled knowledge gained from the experience and thinking

of others further alienating the student from the immediate and concrete. In traditional

education the student is seen as a receptacle or a depository, and the teacher is seen as the

depositor. Like Dewey, Freire emphasizes the need for interaction with the world for the

exercise of the creative instinct and for experimentation. True knowledge can result only

from such experientially based learning permitting the learner to make their own way

through the unknown. Freire stated (1971, p. 58):

> The teacher issues communiques and makes deposits which the students patiently
> receive, memorize, and repeat. This is the banking concept of education, in which
> the scope of action allowed to the students extends only as far as receiving, filing,
> and storing the deposits. They do, it is true, have the opportunity to become
> collectors or cataloguers of the things they store. But in the last analysis, it is men
> themselves who are filed away through the lack of creativity, transformation, and
> knowledge in this (at best) misguided system. For apart from inquiry, apart from
> the praxis, men cannot be truly human. Knowledge emerges only through
> invention and reinvention, through the restless, impatient, continuing, hopeful
> inquiry men pursue in the world, with the world, and with each other.

Similar to Dewey, Kurt Lewin (1951) expressed support for the individual learner

as an active agent in the learning process through his or her interaction with the

surrounding environment. Jean Piaget (1952) conceptualized learning as a process where

intelligence is shaped by experience over time. His work, while meeting many of the

traditional challenges opposed to experiential learning, provided a developmental

framework through which we can better understand intellectual growth. Stewart (1990,

p. 52) stated that

> The works of Dewey, Lewin, and Piaget provide the foundation for the more
> recent contribution of David Kolb. Kolb developed a model for experiential
> learning . . . Kolb's model outlines the learning experience as a constantly revisited
> four-step cycle. This model is value free in that none of the resulting styles formed
> from the interaction of the four steps is considered inherently better than another.
> When viewed in its theoretical sequence, the model's four steps, or the abilities
> obtained by the learner, begin with concrete experience, followed by reflective
> observation, abstract conceptualization, and active experimentation. Initiated by
> the individuals concrete experience, the process moves through a period of
> reflection on that experience. That reflection stimulates the learner to organize
> observations about the experience and create concepts around the organization to
> better understand his or her world. Through the new understanding,
> individuals find the confidence to experiment actively and thereby enhance their
> learning. That experimentation leads the individual to revisit the four steps of the
> cycle beginning with new sets of concrete experiences.

Eisenstodt (1997) explained that Keio University in Japan is scrapping traditional education and gearing up a whole new curriculum based upon personalized, digitized, and globalized concepts. This approach promises to create the next generation of independent, creative thinkers equipped to meet the challenges of the information economy based on progressive experiences with professors and society. Experiential learning concepts seem to be the focus for the future of progressive learning. Tumin (1976, p. 48) said, "is experiential education worth the effort and resources? . . . the answer is decidedly yes, if we realize, first, that many important things are not learned well in traditional schools and, second, that many important things are not learned at all." Denise and Harris (1989, p. 279) stated that "Experiential education has survived a period of vigorous innovation and has 'arrived' in the sense that its use is widespread and it has gained a degree of institutional acceptance both in and out of academia."

<u>Active Learning</u>

Active learning is highly related to experiential learning. Whereas active learning involves the learner to be active constantly through the learning process experiential learning may not involve activity but would require the experiencing of the learning at hand. For example, a student could be involved in experiential learning while viewing a wrestling match where first hand experience is required but no significant activity is taking place. The difference between experiential and active learning for this same example would be that the student would need to become one of the participants in the wrestling match thus gaining an active part in the learning process. Both approaches to learning however involve a high amount of student participation. The Center for the Enhancement

of Teaching at the University of Northern Iowa (1995, pp. 1-2) addressed experiential

learning and stated that some might argue that there also even exists passive learning.

Bonwell and Eison (1991) stated that active learning requires more that being alert or just

listening. They say that students are required to be engaged in activities which also

involve discussing, problem solving, higher order of thinking, application, analysis,

synthesis, or evaluation. Active learning requires student participants to think about

doing. John Dewey stated (1902, pp. 11-12) that;

> No number of object lessons, got up as object lessons for the sake of giving
> information, can afford even the shadow of a substitute for acquaintance with the
> plants and animals of the farm and the garden acquired through actually living
> among them and caring for them . . . Verbal memory can be trained in committing
> tasks, a certain discipline of the reasoning powers can be acquired through lessons
> in science and mathematics; but, after all, this is somewhat remote and shadowy
> compared with the training of attention and of judgement that is acquired in having
> to do things with a real motive behind a real outcome ahead.

Active learning through experiences has a more limited meaning. Jackson and

Caffarella (1994) trace three facets of experiential learning leading to the importance of

active learning as practiced in higher education: field-based experiences such as

internships, practica, supervised practice, and service learning projects; classroom

experiences such as demonstrations, role playing, and other activities that stimulate or

incorporate practice-based situations; and credit for life experiences such as that provided

through the Council for the Assessment of Experiential Learning, CAEL (Keeton, 1980).

Whatever the method may be, the engagement of students through experiential means is

an important avenue for active learning. Educational experiences lead to a higher order of

thinking and problem solving. Problem solving based upon activities according to the

literature stimulate the success of effective learning.

Active learning projects associated to education should not be viewed as separate entities unto themselves. They can be integrated with other aspects of the educational realm and curricular sequences such as career education, family life education, and the like. Active learning can be applied to many areas in order to enhance subjects being taught in standard curricula. Some common applications for action learning are environmental and energy concerns, consumer economics, community recreation development, urban development, food production, government analysis, employment and/or housing explorations, child care centers, tutorial programs, beautification projects, programs for the aged, and various racial, religious and social involvement. The focus of active learning is learning by involvement which would enhance the learning potential of students (Aronstein & Olsen, 1974).

Lifelong Learning

Another aspect of progressive education is the principle of lifelong learning. The concept that learning is a lifelong process follows progressive ideals for education based upon experiences, activities, and awareness. Longworth (1997) stated that;

> Lifelong learning is the development of human potential through a continuously supportive process which stimulates and empowers individuals to acquire the knowledge, skills, values and understanding they will need throughout their lifetimes, and to apply them with confidence, creativity and enjoyment in all roles, circumstances and environments.

> In the first place it has to be lifelong -- from the cradle to grave, from maternity to eternity, from hatch to dispatch. Secondly it has to be learning -- not teaching, not course provision, not training, but out and out focus on the needs and demands of the learner, however strange that may be. Thirdly it has to marry all of this to a seamless infrastructure which makes available all the resources of the community, including human resources, for the development of all the human beings.

Galbraith (1995, p. 6) further substantiated the association of progressivism and

lifelong learning and stated that;

> Lifelong learning and lifelong education have become popular slogans within the
> lexicon of American language. The two phrases have been used interchangeably
> within the literature as well as synonymously to mean and promote adult,
> continuing, and community-based education. The very nature of the words
> suggests that lifelong learning and lifelong education do not take place only in
> adulthood but throughout life from birth to death.

Galbraith (1992, p. 3) "The word life conjures up definitions that range from

political, religious, sociological, historical, anthropological, and psychological

perspectives. Understanding life involves determining how society measures it and views

it in relationship to these various perspectives. Life is composed of the growth and

development of the human being that takes place from birth to death."

Galbraith quoting Apps (1985, p. 4) who defined learning, as it applies in a lifelong

context "Learning is defined as those internal changes that occur in our consciousness."

Galbraith (1995, pp. 6-7) then further stated that;

> When one accepts the tenets of lifelong, the definition of learning can be
> broadened to mean a process of transforming experience into knowledge, skills,
> and attitudes through a variety of processes. This definition recognizes the
> experiential nature of learning through different processes . . . Lifelong learning
> means then those changes in consciousness that take place throughout the life span
> which result in an active and progressive process to comprehend the intellectual,
> societal, and personal changes that confront each individual human being.

Lifelong learning, an important principle to progressive education, is the key to the

success of effective learning. Many of the motivations for lifelong learning are

synonymous to the principal values of progressive education. The literature indicates

strongly that lifelong learning is a key component of progressive education.

Collaborative Learning

Collaborative learning provides an environment to enliven and enrich the learning process. Introducing interacting partners into an educational system creates more realistic social contexts, thereby increasing the effectiveness of the system. Such an environment would help sustain the student's interests and would provide a more natural learning habitat.

As Piaget (1928, 1932) pointed out, collaborative learning has a major role in constructive cognitive development. His theory is consistent with other popular learning theories which emphasize the importance of collaboration. Piaget felt that interaction between peers is equally shared. This contrasts teacher-student interactions, where usually the former is in control and the latter follows what the former professes, thus it is not a natural learning process.

Collaborative learning includes a wide perspective of educational aspects which include activities, goals, and processes. Smith and MacGregor (1992, p. 10) said that

> Collaborative learning describes the many educational approaches involving joint
> Intellectual effort by students, or students and teachers together. Most
> collaborative learning activities focus on the student's exploration and application
> of the course material, not the teacher's presentation of it.

Kaye (1992, p. 4) gave the following definition of collaborative learning: "Collaborative learning (is) the acquisition by individuals of knowledge, skills, or attitudes occurring as the result of group interaction, or put more tersely, individual learning as a result of group process."

Michael Shrage (1990) described collaboration in the context of collaborative work. He indicated that people working together with complementing skills can interact

and understand educational issues better than they could if they were to approach it on an individual basis. Collaboration encourages a shared process which brings more meaning to what is learned.

In a collaborative learning environment, where the goal is split into sub-tasks to be carried out by individual peers, it is often found that the peers are assigned roles, that are natural and directly applicable to the given domain (Blaye, et al., 1991). In general, a collaborative learning environment can have the following roles: decomposing, defining, critiquing, convincing, reviewing, and referencing. The collaborative systems for peers reflect each of the related roles (McCalla, 1990). McCalla stated that the decomposing role refers to the job of splitting the given problems into tasks. Each task is a logical sub-unit of the given problem. Each of the tasks can be further split into a number of goals, which the collaborative learning system recognizes. The goals are the learning objectives for the student. A list of goals comprise a task. Proposing a goal from a task is referred to as defining. The goals defined can be traced from the task state to the goal state. Critiquing essentially means countering the hypothesis proposed by a peer with an alternative hypothesis. Convincing is an act of comparing a number of hypotheses and supporting one of them. Reviewing is the job of ensuring that the collaborative interaction leads to constructive learning. The reviewer summarizes the actions taken in the collaborative session for a particular goal. Referencing is the part of providing facts and related material, whenever requested by the other members of the group.

Klemm (1994, p. 2) believed that lifelong learning can be enhanced as people collaboratively engage in learning activities which incorporates the progressive aspects of learning. He stated that "Collaborative learning occurs when small groups of students

help each other to learn." This study reflects the incorporation of collaborative learning as

a part of lifelong learning.

Klemm (p.3) further indicated that:

Traditional education often stresses the learning of facts, as opposed to the
development of higher-level reasoning skills that enables students to grasp the
meaning of information and analyze, evaluate, synthesize, and apply it.
Collaborative learning promotes these critical skills much better than competitive
or individualistic learning environments.

Klemm (1994, pp. 3-4) cited Johnson et al. who described five basic elements true

to collaborative learning as they would apply to the principles of lifelong learning. These

five basic elements were: a) A positive interdependence as students need to be linked to

others that would ensure their success, b) A promotive interaction with each other to

learn, c) An individual accountability for the group's work, d) The social skills developed

when placing people together as a team, and e) The group evaluation process that will

occur in a collaborative environment.

The aspects of collaborative learning were highly incorporated in this study. The

literature indicates that collaborative learning techniques promote a better quality of what

is learned. Collaborative learning concepts provide another critical principle to

progressive education. As students learn together through experiences they are engaged

in a gradual upward trend toward higher learning, thus evoking a truly progressive nature

to learning.

Problem Solving

McAllister (1997, pp. 1-2) explained the important connection between problem

solving and learning.

Every day, in thousands of classrooms, excellent lectures are delivered on fascinating subjects, students and lecturers nod their heads in satisfaction, and on both sides of the podium there is the feeling that everybody understands. Then the students start trying to apply the new ideas. They have not yet absorbed the day's new concepts. They cannot yet use the material in any cognitive fashion. They find they must assimilate this new material a little bit at a time: reflect on the new concept, work a problem, study the result, and repeat that process until the new material is truly understood. Understanding is a worthy goal -- one which is not reached as frequently as it could be . . . Homework problems have long been used to reinforce and develop the ideas presented in lectures and textbooks, but most students are unskilled in the problem solving process and repeatedly fail to achieve the desired learning experience. That failure leads to further uncertainties and a downward spiral in confidence begins at a time when just the opposite is needed. An important obstacle has been the lack of an everyday, common sense, reliable approach to problem solving. A reliable, consistent approach to problem solving makes it possible for students to use the new concepts presented, study the solutions of the problem, think about the new concepts, and come to a true understanding of the subject . . . Success in problem breeds success in learning, and with success comes the upward spiral all of us would like to see for our students . . . Solving problems is a straightforward process requiring: knowledge, rules, and practice.

Stern, Stone, Hopkins, McMillion, and Crain (1994) indicated that what students

learn in experience based learning opportunities extend far beyond the understanding of a

particular field of emphasis. They state that a much more far reaching benefit will be

developed in student's competence, confidence, and potential in problem solving when in

the context of an experiential atmosphere. They cited one experience of a telemarketing

student at Hocking College who had the opportunity to deal with problem solving issues

while in a learning situation (1994, p. 65).

We have customer complaints. A person's out in San Francisco. He says his Rocky Boots Leaked. 'Well how long have you had the boots sir?' 'I've had them since Christmas, but I haven't worn them yet,' or 'I got them last Christmas as a gift and I've worn them only twice and they leak.' 'Well, you could take them back to the store, sir.' 'Well, I got them as a gift, and I don't know where the person got the boots.' They all want to send the boots back to the factory to have them replaced, because they don't want to go back to the retailer who doesn't want anything more to do with the boots. So students need to learn how to finesse customers, think on your feet, and make some judgements about those kind of things.

This problem solving situation follows the strategy defined by Savoie and Hughes (1994) to incorporate effective learning based upon problem solving activities. In order for the activity to become relevant, they described the following actions as appropriate in the problem solving learning process:

- Identify a problem suitable for the students.

- Connect the problem with the context of the student's world so that it presents authentic opportunities.

- Organize the subject matter around the problem, not the discipline.

- Give students responsibility for defining their learning experience and planning to solve the problem.

- Encourage collaboration by creating learning teams.

- Expect all students to demonstrate the results of their learning through a product or performance.

This study also reflects learning based on the preceding strategies for problem solving. Students participated in educational activities and resolved problems as they were encountered using the actions identified by Savoie and Hughes. The incorporation of problem solving techniques into learning situations is a purely progressive approach to learning. Students are able to grasp concepts through the experiences they gain by solving realistic problems and thus obtaining an awareness of solutions to the problems. Problem solving then becomes an important ingredient to learning for this study.

Service Learning

Orientation and Definition

The following definition of service learning was developed by the Corporation for

National Service (1977, p. 7) as a part of their briefing materials for national community

service:

> Service learning is a method through which citizenship, academic subjects, skills,
> and values are taught. It involves active learning -- drawing lessons from the
> experience of performing service work. Through service learning is most often
> discussed in the context of elementary and secondary or higher education, it is a
> useful strategy as well for programs not based in schools. There are three basic
> components of effective service learning: The first is sufficient preparation, which
> includes setting objectives for skills to be learned or issues to consider, and
> includes planning projects so they contribute to learning at the same time gets
> done. The second component is simply performing service. Third, the participant
> attempts to analyze the experience and draw lessons, through such means as
> discussion with others and reflection on the work. Thinking about service creates
> a greater understanding of the experience and the way service addresses the needs
> of the community. It provides a concern about community issues and a
> commitment to being involved that mark an active citizen. At the same time the
> analysis and thought allow the participants to identify and absorb what they have
> learned. Learning and participating citizenship are lifelong activities which extend
> far beyond the conclusion of formal education. Service learning can be used to
> increase the citizenship skills of participants of any age or background. For this
> reason service learning can be a tool The achieve the desired results of programs,
> even those involving older, highly educated participants. For example, service
> learning can be a part of the training of participants to prepare them to do high
> quality service that has real community impact.

Further, service learning is a method by which people learn and develop through

active participation in thoughtfully-organized service experiences that meet actual

community needs, that coordinate in collaboration with an institution of education, that

are integrated into each student's academic pursuits, that provide structured time for the

student to think, talk, and write about what they did and saw during the service activity,

that provide students the opportunities to use newly acquired academic skills and

knowledge in real life situations in their own communities, that enhances and reinforces

what is taught in the classroom, and that help to foster and develop a sense of caring for

others.

Carol Kinsley (1994, p. 41), the Executive Director of Community Service

Learning Center, stated that service learning;

> Is grounded in both common sense and in sound education theory; it goes all the way back to Aristotle. In our own century, John Dewey, and more recently, Ralph Tyler and Hilda Taba have reminded us that students who actually do things, who engage in activities related to school subjects, learn more efficiently, more effectively, and remember what they have learned much longer than students who don't.

> For Dewey, it had to do with the fact that 'the mind is not individual but social, and that learning is a by-product of social activities.' For Tyler and Taba, the point was simply that 'learning occurs through the active behavior of the student. It is what (the student) learns, not what the teacher does.' Those principles have been borne out by study after study, and in the work of such widely respected - and diverse - educators as Jean Piaget, James Coleman, and David Kolb, to name a few.

As with this study, the concept of service learning provides a very progressive

approach to education where students are learning as they are doing. Service learning not

only provides learning opportunities that are highly experiential and active but adds

another dimension of social responsibility for students. Those who participate are learning

based primarily through experiences and providing a beneficial service while thus engaged.

Kinsley (1994, p. 41) went on to give her definition of service learning as an

"educational process - not a program - that involves students in service experiences with

two firm anchors: First their service experience is directly related to academic subject

matter; and second, it involves them in making positive contributions to individuals and community institutions."

Service learning is experiential learning coupled with opportunities for students to focus their intelligence and ideals on real and significant needs which exist in the community and have real consequences. Service learning has been gaining in popularity due to the union of two movements - education reform and initiatives for public service. Education reform visualized an educational process which would be relevant, active, experiential, and involving (Chickering, 1977). It sought to bring learners into direct contact with subjects of study, provide opportunities to apply and test knowledge, and emphasize cognitive skill development and self-directed learning. The public service initiatives saw the purpose of education as the development of responsible citizens which would reinvigorate the public service mission of higher education, promote student volunteerism, connect students with social problems, and build habits of the heart. Service learning merged these movements and sought to illuminate academic disciplines and add meaning to them through experience. Kohlmoos (1994) stated that service learning is something greater than a program with a finite beginning and end. Service learning is an organized process for assembling and structuring educational delivery right in the thick of the dynamic confluence of the community. Service learning does not just intersect with reform; it is an integral part of reform. By its definition, service learning is change. Service learning is by design an ongoing effort to break down the barriers and build bridges - to create a lasting connection between the constantly changing needs of the community and the educational effort to address them. Peter Slavin (1996, pp. 608-609)

interviewed Jeremy Rifkin, a noted authority on employment and education. In the

interview Rifkin stated:

> Our education system is still encoursed in Industrial Age values. Schools raise children to believe they're only valuable if they're market producers and consumers. But only a fraction of them will find full-time employment in the Information Age economy. We need to rethink the mission of American education to prepare children for two worlds - the marketplace and the civil society, where more and more of the work is going to take place.

> Increasingly, a quiet revolution is already going on in schools. It's service learning, where students in middle school, high school, or college have to do a certain amount of work for non-profits to graduate. Service learning is spreading to entire school systems and states. Young people, by and large, enjoy it. It's a challenge. It gives them a sense of belonging, of being, of participation, and of self-esteem.

> What if we were to deepen the service learning experience and also to teach children about the major contribution of the civil society to American life - its 200 year history, legacy, and values? Children are taught about capitalism and representative government but not a thing about the banding together of millions of people in voluntary, fraternal, civic, advocacy, and service organizations to do good works and create social capital. These religious and secular groups have played at least as important a role in creating the American character as has the market or the government.

> Children so instructed would come of age with two value systems - that of the market, where competition, efficiency, and utility reign, and that of the third sector, where the values of reciprocity, stewardship, participation in community, and caring for others hold sway. Children who learn about the heros of the civil society who helped make America the country it is might have a very different idea of what their options and advocations might be when they grow up.

> For poor children in particular, service learning could lead to self-esteem and motivation. There's nothing like giving someone responsibility at a very young age for others in the community. Millions of inner-city youngsters could be working in their neighborhoods.

> The next generation would learn to see social capital as every bit as important as market capital. I can see the time coming when people spend four to five hours on their jobs in the marketplace and the rest of the day with their families and communities producing social capital.

So we're going to need two sets of teachers in the schools - one in the classroom, another to supervise the mentor students in service learning in the community. Georgetown University and other law schools already do this with their students.

The proliferation of service learning concepts is having a drastic influence upon the traditional thought to learning. The literature indicates that the traditional philosophy will need to be expanded in order to incorporate correctly service learning principles which are not in line with traditional values. This will be brought about by the increasing popularity that service learning is currently experiencing as an effective and socially contributing method for learning which adds pressure to traditional modes of thought.

Zlotkowski (1996); however, expressed concern on the validity of service learning to the academy. He indicated that the service learning movement would only succeed in achieving a permanent and influential place in the academic table if it makes some important and strategic adjustments. Zlotkowski stated that service learning, to this point, has made little impact on the culture and consciousness of the academy in general. He conceded; however, that fortunately, several recent developments suggest support for the legitimate acceptance of service learning into the academy. One example which identifies a solidarity toward service learning was the December 1993 meeting at the Johnson Foundation's Wingspread facility in Racine, Wisconsin, to lay the foundations for the country's first faculty-based service learning association.

Delve, Mintz, and Stewart (1990, p. 117) indicated that at the Wingspread conference, sponsored by the Johnson Foundation, other national organizations, and representatives of many different types of schools, colleges, and programs, ten principles for service learning, were identified and withstood the scrutiny of the group. These

principles could be used with any application of service learning and represented a global

focus for the concept. The ten principles are:

1. An effective service learning program engages people in responsible and
challenging actions for the common good. Participants in programs combining service and
learning should engage in tasks that they and society recognize as important.

2. An effective service learning program provides structured opportunities for
people to reflect critically on their service experience. The service experience alone does
not ensure that either significant learning or effective service will occur.

3. An effective service learning program articulates clear service and learning
goals for everyone involved. From the outset of the project, service participants and
recipients must have a clear sense of the goals both of what is to be accomplished and
what is to be learned.

4. An effective service learning program allows for those with needs to define
those needs. The actual recipients of service, as well as the community groups and
constituencies to which they belong, must have the primary role in defining their own
service needs.

5. An effective service learning program clarifies the responsibilities of each
person and organization involved. Several parties are potentially involved in any service
learning program; it is important to clarify the balance of roles and responsibilities of these
parties.

6. An effective service learning program matches service providers and service
needs through a process that recognizes changing circumstances. People are often

changed by the service learning experience and there must be provided

opportunities for feedback about the changes.

7. An effective service learning program expects genuine, active, and sustained

organizational commitment. In order for a program to be effective, it must have a strong,

ongoing commitment from both the sponsoring and receiving organizations.

8. An effective service learning program includes training, supervision,

monitoring, support, recognition, and evaluation to meet the service learning goals. The

most effective service learning programs are sensitive to the importance of training,

supervision, and monitoring of progress throughout the program.

9. An effective service learning program ensures that the time commitment for

service learning is flexible, appropriate, and in the best interests of all involved.

10. An effective service learning program is committed to program participation

by and with diverse populations. A good service learning program promotes access and

removes disincentives and barriers to participation.

Gamson (1995) gave accounts of fifteen states and more than 475 institutions that

had become members of the Partnership for Service Learning, a consortium of colleges,

universities, and non-profit organizations which offers students intensive opportunities for

learning through service. Gamson further indicated that service learning focuses upon

learning through experience integrated through service.

Kahne and Westheimer (1996, p. 593) stated that;

Educators and legislators alike maintain that service learning can improve the
community and invigorate the classroom, providing rich educational experiences
for students at all levels of schooling. Service learning makes students active
participants in service projects that aim to respond to the needs of the community
while furthering the academic goals of students.

Through service learning concepts students can gain experience in real learning environments and also provide a service back to the community. Tyler (1949, p. 11), many years previous, in his book Basic Principles of Curriculum, outlined the importance of incorporating meaningful opportunities into the curriculum. Tyler stated that there should be "opportunities for the student to enter actively into, and to deal wholeheartedly with, the things which interest him." Through the service learning experience, the students and teachers validate this theory.

Bringle and Hatcher (1996, p. 222) stated that service learning possibilities could be credit-bearing experiential education opportunities where "students participate in an organized service activity that meets community needs and reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of civic responsibility." Service learning concepts not only provide, through experiences, realistic learning opportunities but also bring in other dimensions to learning that reflect social, democratic, and civic responsibilities, thus enhancing a *global* learning potential.

Aronson (1995, p. 17) expressed the need for service learning in today's education system citing one example of how service learning in collaboration with the community can be of benefit to both. She stated that;

> education shouldn't and doesn't occur exclusively at school or during regular
> school hours. One way schools can create more student learning time is to
> collaborate with outside agencies and individuals to provide more community-
> based learning opportunities for students. For example, the International Studies
> Academy in San Francisco collaborates with local community organizations to
> provide a variety of service learning opportunities for its students. Students enroll
> in the school's Academy of Finance and have internships with private sector firms
> that relate to what they learn during their formal classes. The school hopes to
> realize its vision of blurring the distinction between school and community learning

opportunities by developing additional partnerships with a variety of businesses, organizations and institutions locally and abroad.

A Report of the Commission on the Future of Community Colleges (AACJC, 1988) recommended the following:

> We urge all community colleges to encourage a service program at their institution, one that begins with clearly stated educational objectives. We further recommend that students participating in service programs be asked to write about their experience and to explore with a mentor and fellow students how it related to what they have been studying in the classroom.

Dickenson (1995, p. 1) quoted Gerri Glass, director of an institutional learning center, who stated that "This is not charity work. Service learning is connected with specific goals for learning."

Other Related Literature to this Study

Other literature substantiated the need for alternative teaching/learning methods especially in the community college environment. Recent research has raised disturbing questions about the academic rigor of the community college classrooms, and consequently, the real level of opportunity offered there (McGrath & Spear, 1991). McGrath and Spear (1991, p. 66) further indicated that "As new institutions, community colleges had no strong traditions to draw on. Since the canonical model encouraged them to regard curriculum and pedagogy as purely instrumental, they took from here and there, theory from this and that tradition, practices from wherever." Wirth (1992, p. 97) stated that "As we entered the 1990s a call began to emerge for a new wave of reform to education-for a fundamental restructuring of schools in both management style and styles of teaching and learning." From the literature it seems that issues related to alternatives in

teaching/learning also takes its place among the current priorities to future directions and the desired success of the community college concept.

Qualitative Research

Qualitative research is a generic term for investigative methodologies described as ethnographic, naturalistic, anthropologic, field, or participant observer research. It emphasizes the importance of looking at variables in the natural setting in which they are found. Interaction between variables is important. Detailed data is gathered through open ended questions that provide direct quotations. The interviewer is an integral part of the investigation (Jacob, 1988). This differs from quantitative research which attempts to gather data by objective methods. Data is gathered to provide information about relations, comparisons, and predictions. This approach attempts to remove the investigator from the investigation (Smith, 1983). According to Stainback and Stainback (1988) qualitative research can be characterized as follows: a) Purpose -- understanding, seeks to understand people's perceptions, b) Reality -- dynamic, reality changes with changes in people's perceptions, c) Viewpoint -- insider, reality is what people perceive it to be, d) Values -- values will have an impact and should be understood and taken into account when conducting and reporting research, e) Focus -- holistic, a total or complete picture is sought, f) Orientation -- discovery, theories and hypotheses are evolved from data as collected, g) Data -- subjective, are perceptions of people in the environment, h) Instrumentation -- human, the human person is the primary collection instrument, i) Conditions -- Naturalistic, investigations are conducted under natural conditions. j) Results -- valid, the focus is on design and procedures to gain real, rich, and deep data.

Case Study

Case studies are detailed investigations of individuals, groups, institutions, or other social units. The researcher conducting a case study attempts to analyze the variable relevant to the subject under study (Key, 1996). The principal difference between case studies and other research studies is that the focus of attention is the individual case not the whole population of cases. Most studies search for what is common and pervasive. However, in the case study, the focus may not be on generalization, but to understanding the particulars of the case, in its complexity. A case study focuses on a bounded system, usually under natural conditions, so that the system can be understood in its own habitat (Stake, 1988).

Interviews

Stainback and Stainback (1988) identified six concerns that the researcher should be aware of when doing interviews. (1) The researcher should control his/her reactions. The purpose of the interview is to find out what views people hold; their views should be unbiased by evaluative responses on the researcher's part. (2) The researcher should choose an interview environment and conditions in which the participants feel comfortable, secure, and at ease enough to speak openly about their point of view. (3) The researcher should avoid presenting yes or no questions which tend to strife detail. (4) The researcher should be flexible to his/her approach to the informants. (5) Group interviewing can be useful, particularly in initial interviews. (6) The researcher should

consider what degree the interview questioning is recursive. As applied to interviewing, what has been said in an interview is used to determine or define further questioning.

Additionally, focus group interviews are useful tools to the researcher in gathering important data and information. By gathering several participants together in a group setting at different times through the study and discussing issues that pertain to the study, important data can be gained through group participation.

Participant Observation

A common method approach to the identification and collection of pertinent data in qualitative research is participant observation. Dobbert (1982) stated that the participant observer systematically seeks out and organizes data concerning what is being studied based on a social theory and methodology rather than focusing on achieving a situationally defined goal. He also stated that the participant observer keeps detailed records of what occurs, including those things characteristically taken for granted. The participant observer periodically detaches him or herself from the situation to review records from a neutral position of a social scientist. Dobbert further stated that it is important for the participant observer to monitor observations and records for evidence of personal bias or prejudice.

Spradley (1988) identified five levels of activity as a participant observer. He explained them as follows:

1. *External participation* constitutes the lowest degree of involvement in observation. This type of observation can be done by observing situations such as television, documentaries, or video tapes.

2. *Passive participation* is where the researcher is present at the scene of activity but does not interact or participate. In this level of participation, the researcher finds an observation post and assumes the role of a bystander or spectator.

3. *Balanced participation* is where the researcher maintains a balance between being an insider and being an outsider. The researcher observes and participates in some activities but does not participate fully in all activities.

4. *Active participation* is a level of participation where the researcher generally does what others in the study do. The researcher in this level would in the beginning do observation to learn the rules. As they are learned the researcher would become more actively engaged in the activities of the setting.

5. *Total participation* is in a setting where the researcher is a natural participant. This is the highest level of involvement and usually comes about when the researcher studies something in which he or she is already proficient.

Focus Groups

Hawe, et al. (1990, p. 174) stated that "A focus group is another name for a group interview or a group discussion where the focus is on a particular topic of interest . . ." Focus groups use a discussion format, guided by a facilitator to gather information on a given topic. Focus groups provide an understanding of the range and depth of opinions, feelings, and beliefs, rather than the number of people who hold a particular view or opinion. Focus groups are a qualitative research technique best used when the aim is to explore an issue and may be used prior to more qualitative analysis.

Morgan and Krueger, in Morgan (1993) said that consideration should be given to focus groups when: a) there is a power differential between participants and decision makers, b) there is a gap between professionals and their target audiences, c) investigating complex behavior and motivations, d) there is a need to learn more about the degree of consensus on a topic, and e) you need a friendly research method that is respectful to the target audience.

Focus groups should not be too large in order to maintain manageability. The literature indicates that a manageable focus group should range anywhere from 6-12 participants. Hawe et al. (1990, p. 176) indicated that "The usual way of locating participants for focus groups is through the informal networks of colleagues, community agencies, and the target group. Sometimes you need to advertise to attract a wider range of options . . ."

Hawe, et al. (1990, p. 182) also stated that when recording and analyzing data accumulated in the focus group method that:

> Whether you use a tape recorder or take notes as you go along, as soon as possible after the focus group you should write down your broad impressions, your feelings about how the group process worked and on any limitations or procedural variations you were aware of.

Qualitative focus group data may be examined by means of theme analysis, which involves analyzing/organizing the themes or patterns indicated by the data. The aim of a focus group is to elicit the range of options so that all options should be represented in the analysis, even those held by just one or two participants.

Corroboration

The purpose of corroboration is not to confirm whether people's perceptions are accurate or true reflections of a situation but rather to help ensure that the research findings accurately reflect people's perceptions, whatever they may be. The purpose of corroboration is to help researchers increase the probability that their findings will be seen as credible or worthy of consideration by others (Stainback and Stainback, 1988). One process involved in corroboration is triangulation. Denzin (1978) stated that one type of triangulation involves the convergence of multiple data sources. These sources could include personal journals kept by the participants, video taping of the study, focus group discussions, and personal interviews. Triangulation, a method of corroboration, can gain multiple perspectives of data collection thus enhancing the credibility of the study.

Summary

The literature indicates that there exists a common confusion and lack of identity as the community college enters into the sixth generation. Also there is lack of cohesiveness on the value of existing teaching/learning styles and more progressive methods that are predicted to play an important role into the community college's future goals. Many believe that if these concerns are not addressed in a timely manner the community college will lose its identity entirely.

Progressive education, as a concept, is an identified alternative learning method which incorporates experience into real life learning opportunities. Community colleges are experimenting with the inclusion of progressive methods into their learning agendas

through the service learning concept. Progressive principles and service learning, which embrace the importance of meeting societal needs, might be considered effective tools for community college reform. These concepts would fit well into the current comprehensive mission of the community college which focuses on satisfying community education needs and providing service for the communities which they serve. These concepts are also the major focus of this study.

CHAPTER III

RESEARCH METHODOLOGY

Introduction to the Research Methodology

This chapter will discuss the research process and data collection methods used for this paper. The method of research used in this study was based upon qualitative principles.

The first section of this chapter discusses the student participants involved in the project and the setting of where the study took place. An explanation of the research treatment which involves learning methods that incorporate progressive, experiential, and service learning concepts will also be discussed, this section of the chapter will give a description and analysis of each of the student participants. A description of the setting and the incorporation and involvement of student participants into the study will also be given.

The second section discusses the design of the study based upon a qualitative case study research approach. This section will also give a general identification of the significant strategies for data collection.

The next section is referred to as specific data collection procedures. This section will concentrate on each of the previously identified data collection strategies and explain the methods relevant to each technique as they were applied throughout the study.

Integral aspects that were evident during the data collection and also the processes

pertinent to collection that evolved as the project and the study developed will be detailed.

The last section will address the analysis of the collected data based upon

principles of qualitative research. A discussion on how the data was analyzed will be

related. Guidelines for maintaining validity in data analysis will also be discussed as they

pertained to the study. A chapter summary will then follow with a synopsis of the

information accumulated in this chapter and its relevance to the study.

The Student Participants

The student participants in this study were typical to the standard for community

college students in the United States of America. This research was the result of a case

study project that took place during the summer of 1996 from June through August. The

student participants of this study consisted of architecture and construction students

representing Oklahoma State University-Oklahoma City. The students involved in this

study, as a community service, prepared an in-depth architectural study of the downtown

business area of Guthrie, Oklahoma and made recommendations on what that city might

do to enhance its historic downtown business area. The participant students were

appraised during the previous semester about the Guthrie Oklahoma project and were

encouraged, along with all other OSU-OKC architecture/construction students, to

participate. The eight students who eventually signed up for the course were those who

chose to participate. The enrollment for this course was not unusual for a typical summer

semester course in architecture at OSU-OKC. The course was divided into two three-

credit hour sections and called The Guthrie Experience I and II. Students had the option

of enrolling into both sections for a total of six credit hours or only one section for three credit hours depending upon the amount of time that they could dedicate to the project. All but one of the students signed up for the full six credit hours.

In April 1996 the group of student participants, who had pre-enrolled for the course offered through Oklahoma State University-OKC, met to decide how to approach the upcoming project. The students met again in late May 1996 to plan for the beginning of the project. They all agreed at that meeting that the best possible situation for doing the project would be to relocate and set up an office in Guthrie. This decision was based upon student input. It was the recommendation of all of the students who would be participating in the Guthrie Project that the preferred meeting place be at Guthrie, Oklahoma and if possible in the historic downtown district. Guthrie City provided about 800 square feet of space in one of the historic buildings in downtown Guthrie for the student architectural group to use as a home base, they also informed the business community that a study of this nature would be taking place, and encouraged business to allow students to gather whatever information might be necessary to help insure the success of this project. Previous arrangements had been formalized with the City of Guthrie to begin the project on June 10, 1996.

Guthrie Oklahoma is a community of about twenty-five thousand residents. Geographically, it lies approximately thirty miles north of Oklahoma City, almost directly in the center of the state of Oklahoma. Guthrie has a rich historical background and local historians boast that it was the first State Capital for Oklahoma before some "ruffians" from Oklahoma City came in the middle of the night and stole the state seal away. The city has successfully been able to preserve and maintain many of the historical buildings of

the area which are today a visual remnant of its colorful past. Currently the residents of

Guthrie occupy a mid to lower-mid socioeconomic status level. Guthrie has an

abnormally high percentage, as per Oklahoma standards, of minorities who live there.

Most of these people are part of the population who are struggling for financial success.

However, Guthrie has a strong cohort of wealthier people who seem to have substantial

influence upon many of the major political influences of the area and make many of the

decisions pertinate to the community. The community had a small town feel for

hospitality but generated a desire for municipal improvement. This environment made

Guthrie, Oklahoma an ideal location to administer an architectural study for community

enhancement which would also provide a great opportunity to render meaningful service

and provide a wonderful educational experience.

There were eight architecture and construction student participants involved in the

learning project. The names used for the students in this paper are fictitious and only

represent the real students who's names will remain anonymous. Student #1 will be

referred to as Brad. Brad was an architecture student who was well into his second year

of the program. Brad was a white male in his mid twenties. He had environmentally

conscious architectural concepts and utopian ideas about preservation being the focus of

this proposal. Brad was very interested in this experience and had a positive attitude and

high expectations about the opportunity for learning in this type of environment. Brad

would often bring a bedroll and stay at our flat all night and on weekends as he became

totally emersed into the project. Brad evolved as one of the group leaders mostly because

of his passion and dedication to the project and extensive time commitment.

Student #2 will be called Jeff in this paper. Jeff was an architecture major and needed only a few credits in order to graduate. His plans were to transfer to the School of Architecture at OSU-Stillwater, a five-year accredited program. Jeff was a younger white male in his very early twenties. He had not yet established many personal values toward architecture or education at this point and seemed preoccupied with other outside activities such as softball games, cars, and dating. However, Jeff did have great potential for the development of architectural design skills and leadership possibilities. A bit of friction existed between Jeff and Brad for dominance in leadership of the group. Yet, this friction did not last long as the magnitude of the project overtook any pettiness between student leadership desires.

Student #3 will be referred to as Stan. Stan was also just a few credits shy of graduation in the architecture program. He still did not have any concrete plans of what to do after graduation. Stan was very similar in age and values to Jeff and they were good friends. He was partially of Native American decent with a quiet and pleasant personality. Even though he was much quieter than Jeff, Stan was very focused on what the tasks at hand were and was very teachable. Stan had difficulty meeting as often as some of the other students because of work obligations and financial needs. Stan came from a lower socioeconomic status and needed to work hard in order to support his schooling.

Student #4 will be called Judy in this paper. Judy seemed to be a career architecture student and had attempted to take, and sometime not finish, every architectural course. She would be considered a second year architecture student. Judy expressed a very willing and flexible attitude and basically went along with the majority of

the group's interests. Judy was a black American female in her mid-thirties. Judy worked

well with others and concentrated upon doing what everyone else wanted.

Student #5 will be referred to as Ann in this paper. Ann was a recent graduate the

spring previous with an associate degree in architecture. Ann had a very strong

commitment to the project and a diligent work ethic. Ann was a white female in her early

thirties and a native of Brazil. Ann had independent ideas but was respectful to others and

their ideas while keeping an open mind. Ann emerged as the silent leader of the team,

always contributing quality input and information and providing guidance for the team

focus and goals.

Student #6 will be called Bill in this paper. Bill would be considered a second year

architecture student. Bill spent the least time on the project and participated very little

because of work obligations and other personal commitments. Bill was a white male in his

mid-twenties. The time that Bill did spend on the project was unproductive because of his

preoccupation with other thoughts. He could not adequately be dedicated to the project

even when he was there.

Student #7 will be referred to as Jim in this paper. Jim was a construction major

and needed only a few more credits in order to graduate. Jim was the most mature of the

group in age and also in professional experience. Jim was a white male in his mid 40s who

had been a construction superintendent and involved with the construction industry for

many years. Jim brought many insights and much guidance to the team. Jim emerged as

one of the major leaders of the team and was a very dedicated participant working many

hours on the project. Jim had a very good attitude about the possibilities of the project

both professionally and educationally. Jim stated one late afternoon upon completion of

the day "I don't even want to go to work. I enjoy this much more and wish I could do it all the time."

Student #8 will be referred to as Don in this paper. Don was the least experienced professionally of the group. This was Don's very first architectural course. A Native American male in his mid thirties, Don was an injured maintenance worker coming back to school for retraining. The study of architecture was his chosen pursuit of study. He was like a sponge absorbing everything possible to learn and was excited about the project and its possibilities. He was a very dedicated participant to the project who could not contribute too much in architectural direction but made up for it in ambition and desire.

The Design

This study was based upon a qualitative approach. The research depended upon a case study which focused upon potential learning capabilities of community college students over an eight-week period of time. The treatment, or in this situation, the learning application used throughout the duration of the eight week session incorporated progressive/exploratory education techniques that also included service learning concepts. The learning environment did not assume the traditional classroom aspects but focused upon a realistic environment. Indeed the architectural task, which was used as the impetus for the research study, was an actual architectural project developed cooperatively to meet the real needs and give service to the community of Guthrie, Oklahoma. The instructor was a participant observer during the study and worked side by side with each of the student participants in the development of the project. Verification for the effectiveness of

this learning methodology might be effective for community college students and the possibilities, problems, and political aspects of the study were obtained through observation methods such as researcher participant observations, researcher journal entries, outside observer personal journal entries, video taped focus group discussions, random small group discussions held often during the project development, random personal interviews held often during the development of the project, video taped formal personal interviews with each student participant, student personal journals, and surveys to the community of Guthrie Oklahoma.

Data Collection Procedures

One of the major sources of data collection was video taping. All of the preliminary events were captured through video tape by the researcher who would also act as a total participant observer in this study. Spradley (1980) identified five types of participant observation ranging from *external participation* to *total participation*. He stated that total participation meant that the researcher was a natural participant. This is the highest level of involvement and usually comes about when the researcher studies something in which he or she is already a natural participant. The researcher had a substantial history of architectural experience and had practiced architecture for twenty years previous. Because of his prior experience as an architect and his continuing association with the students he was considered a total participant in the project. The researcher acted as only one of the group members who prepared the official presentation for the city of Guthrie and worked hand in hand with the students throughout all stages of the project. This allowed the researcher the opportunity to see, hear, and experience first

hand many of the issues that arose during the study and actively participate in the development of the architectural proposal.

Another student who was not part of the study group but was at the time enrolled in the horticulture program was enlisted as an outside observer. This student was assigned to video tape the project as much as possible and also to keep a journal/daily log of personal observations during the project. The observations of the outside observer would serve as another effort to bring credibility to the study through triangulation. Denzin (1978) stated that there has been identified several types of triangulation. This study used a convergence of multiple data sources for triangulation. The schedule during the project ran for seven weeks continuously, Monday through Thursday, from 8:30 a.m. to 5:00 p.m.. Another week was also used for set up time which was at the beginning of the official start time.

On June 10, 1996, the move from the campus site in Oklahoma City to Guthrie, Oklahoma, a community about thirty miles to the north, took place. The new home of the project for the next seven weeks was located in the middle of the area that was intended to be part of the architectural study. The third level of a historic 100 year old building leased by the city government of Guthrie was our headquarters. Moved over were four computer-aided drafting systems, a plotter, a printer, four full-sized five foot drafting tables, several five foot layout tables, surveying equipment, and a combination of materials that were used to create the presentation. It took a full day and a half to get moved and organized into the new setting. By the time all was set up, the area looked very similar to a practicing architectural work area which created a realistic learning environment for the students.

Throughout the duration of the project, mostly on a weekly basis, focus group sessions were organized in order to discuss the project and listen to what other participants were feeling, experiencing, and learning. These focus group discussions were always documented on video tape for referencing in the future. In the focus group discussions, the researcher could explore additional issues that might have been raised as a result of his personal observations, personal interviews, and/or review of the student personal journals. As a group, in the focus group discussion setting, the participants could consider what others in the group had to offer through discussion. The focus group sessions were exceptionally enlightening and beneficial because of the smallness of the student group and their open relationship with each other and the researcher.

The students were asked to keep a daily personal journal throughout the duration of the project. In this journal they were asked to elaborate on their feeling, ideas, and concerns. They were encouraged to expound in two different areas every day in their journals. First, they were asked to express their excitement for, positive thoughts about, concerns for, and disappointments about the learning process at hand. In essence they were asked to keep any thoughts about this educational experience in their journals. They were also asked to record any thoughts about the architectural aspects, ideas for discussion, historical research awareness, observations, and any other significant input that might be useful toward the development of the proposal. These student journals were reviewed by the researcher at least once a week and sometimes more often depending upon the research needs and directions of the focus group discussions.

As the project escalated into full activity, a great deal of diverse student ventures occurred as they got involved in many different aspects of the related work and

responsibilities at assorted times. The significance of the learning method began to be incorporated into the project which generated a need for each student to assume responsibilities in order to decide on the major direction for the project and which particular focus to concentrate upon next. As this process occurred, the students responded to the autonomous features of the learning methodology and assumed complete control of the destiny of the architectural project. Because of this fact during the height of the project, it was difficult from a research standpoint to observe everything possible about the project's progress. The students during this time were going in all directions doing their part either at the building flat or outside. Personal observation was not entirely sufficient. During this time, when there were several aspects of the project going on at once, an ethnographic approach to research was assumed by the researcher. As stated previously, student journals were frequently referenced, and students were asked to share that information and verbally elaborate with the researcher at periodic intervals throughout the study. This method was used to gather additional relevant information about the study. Commonly throughout this project, different students were working on several aspects of the proposal at the same time. The researcher needed to depend upon participant observation and personal relationships with individual students to gather information. These perceived issues would then be thoroughly talked about in focus group discussions, by the whole group, which were documented on video tape.

Another component of the data was collected through a survey that was distributed to city officials and other members of the community of Guthrie, Oklahoma. During the formal presentation to the City of Guthrie which took place at the Territorial Museum in Guthrie, Oklahoma at 6:15 p.m. on September 17, 1996, two surveys were

distributed to two cohorts, the city government officials and the community members who were present at the time. The meeting was open to the public and several of the Guthrie community members were there to observe. The survey instrument was designed to verify the perceived effectiveness of the project to the City of Guthrie, Oklahoma. The major focus of the two surveys was to identify if the city officials and involved community members were satisfied with the service effort provided by the students (See Appendix A). The questions in the survey were:

1. Were you encouraged or impressed by the proposal for the potential enhancement of the historic down town area of Guthrie, Oklahoma prepared by students from OSU-OKC?

2. Did you feel that the presentation given by the OSU-OKC students on their proposal for the potential enhancement of the historic down town area of Guthrie, Oklahoma was done in a professional manner?

3. Did it appear that the OSU-OKC students were well informed and prepared in their presentation for the potential enhancement of the historic downtown area of Guthrie, Oklahoma?

For these questions a Likert style of scaling factor was used to evaluate responses. The scaled responses varied from Yes, Somewhat, Not Very, No, and ? (meaning "I don't know"). A fourth question which was an open-ended question asked:

4. Could you please make additional comments, observations, and/or suggestions on the effectiveness, positive or negative, of the proposal prepared by the students of the historic downtown area of Guthrie, Oklahoma?

Maintaining Credibility of the Study

Member checking, a qualitative research strategy to maintain validity, was used

periodically during the study to verify from the student project participants the identified

concerns or questions that the researcher might have uncovered during the project.

Lincoln and Guba (1985) stated that member checking and continually testing the

participants on the data and interpretations ensure an accurate translation of participants

viewpoints which also gives credibility to a study through triangulation. The continual

checking, verification of written and videoed data, and rechecking gave direction and

focus on future aspects of the study and verified the researcher's interpretations of the

study.

Peer examination methods for credibility were incorporated into the study. Often

the researcher would solicit feedback and interpretations from several related education

peers on their perceptions of the study, related observations, student behaviors and

possible concerns. This qualitative research technique also explained by Lincoln and Guba

(1985) helps keep the researcher honest and the research questions focused, which have

already been identified by the peer examinations. This also contributes to deeper reflexive

analysis by the researcher. Several times the researcher was appraised of an issue that was

not immediately recognized through peer examination and review. One of many similar

examples of peer examination was during the first two weeks of the project when there

existed a bit of contention between Brad and Jeff. The researcher had not had these two

students together in the same class before and was concerned that the contention emerging

might hinder the progress of the architectural study. After talking personally with some of

the other participant students indirectly about Brad and Jeff, the researcher learned that there had always existed contention between them. Still concerned that contention could affect the architectural aspect of the project and also interested on how contention might have implications for the research topic of this study, the researcher approached another professor who had taught Brad and Jeff in the same class before. After a discussion with the other professor, the researcher learned that both Brad and Jeff had strong leadership potentials and given the proper opportunity each one would develop to into an asset for the project. The information and consultation with the other professor proved beneficial to the relevance of the study. Because of this outside gained information the researcher was able to stay from interfering with a relationship which became important to the findings. Brad and Jeff were left to work into their own realms of comfort during the project and both contributed in their own ways to the study. The contention was also not an issue toward the success of the architectural project; however, the implications gained from the peer examination became very important for the study and how they related to a progressive approach to education.

Data Analysis

The analysis of the combined data gathered by previously described sources was conducted after the completion of the project and delivery of the formal presentation. Throughout the study and during analysis, the researcher utilized nine points for maintaining validity of qualitative research described by Wilcott (1990). Wilcott indicated the following to insure the validity of qualitative research:

1.   Be a listener. The subjects of the qualitative research should provide the majority of the research input. It is the researcher's task to properly interpret the responses of the subjects.

2.   Record accurately. All records should be maintained in the form of detailed notes or electronic recordings. These records should also be developed during rather than after the data gathering sessions.

3.   Initiate writing early. The researcher should make a rough draft of the study before going into the field to collect data. This allows a record to be made as needed.

4.   Include the primary data in the final report. The inclusion of primary data in the report allows the reader to see exactly the basis upon which the researcher's conclusions were made.

5.   Include all data in the final report. Do not leave out pieces of information from the final report because it cannot be interpreted. In these cases the reader should be allowed to develop conclusions.

6.   Be candid. Do not spend too much time attempting to keep personal feelings and reactions out of the study. If these generate relevance to the study feelings and reactions should be revealed.

7.   Seek feedback. The researcher should allow others to critique the study following the developmental process. Professional colleagues and research subjects should be included in this process to insure that information is reported accurately and completely.

8.   Attempt to achieve balance. The researcher should attempt to achieve a

balance between perceived importance and actual importance. Often, the information

reveals a difference in anticipated and real areas of study significance.

9.   Write accurately. Incorrect grammar, misspelled words, statement

inconsistency, etc., jeopardize the validity of an otherwise good study.

All of the data was analyzed through qualitative methods for interpretation. The

researcher, after a complete review of the data, assigned different classifications into

which the data could be categorized. The data was analyzed in a systematic manner. The

massive amounts of video tape, including the frequent focus group discussions, student

personal interviews, and participant activities were reviewed thoroughly and the important

research aspects were extrapolated and put into text form. The text portions gathered

from the video segments were then separated and categorized into the classifications for

data review. A system of color coding and number associations was used to categorize

the data. Student journals were photocopied and coded also according to the previously

identified classifications. Copies of the journals were then cut and distributed into the

appropriate classifications for further data review. The independent research observer's

journal and the researcher's journal were also photocopied, coded, and dissected in order

to distribute the different entries into the appropriate classifications for data review.

Major classifications into which the data could be categorized reflected the major areas of

interest of this study such as: progressive learning, learner centered learning, learning

outside of the classroom, social education reform, experiential learning, active learning,

awareness learning, lifelong learning, problem solving, and service learning. Additional

subclassifications under the major categories were assigned and grouped as they would

relate to each other in meaning. The major classifications and themes of this study were developed through an extensive literature review into the problems identified for this study. Many of the themes for classification emerged and were identified after the data was collected and reviewed; this also resulted into a need for further research into the literature. Each copy of the survey distributed to the Guthrie city officials and related community members was collected and evaluated on a subjective basis. Every response was positive; the surveys indicated that the Guthrie community sincerely appreciated the service that was rendered.

Chapter Summary

This study incorporated a qualitative approach using a case study as its methodology. The study was done with a group of architecture students from Oklahoma State University-Oklahoma City, a community college environment, as they prepared an architectural proposal to give service to the city of Guthrie Oklahoma and to enhance their educational understanding of architectural practices through progressive and experiential methods. The two primary foci of the study were to explore the effects of progressive learning methodologies using experiential, awareness learning aspects and incorporating service learning.

Qualitative data collection methods were used including personal researcher total participant observation, video taping of the entire study of activities, student participant personal journal entries, diverse focus group discussions captured on video tape, several video taped personal interviews with the student participants, a personal journal of an outside research assistant, a personal journal of the researcher, and a survey instrument to

the citizens of Guthrie Oklahoma. The analysis of the data was based upon qualitative methods of data collection and incorporated several methods for control of quality which added validity to the study through triangulation of data collection and validation, member checking, continual reflection for increased understanding of students' learning and potential effectiveness of learning methodologies, and peer evaluations with education colleagues who provided direction and insight into many issues that may or may not have been completely identified by the researcher or produced through the study.

CHAPTER IV

FINDINGS

Overview

Through the administration of an actual progressive educational project study

which incorporated experience, awareness, and service learning concepts, a deeper

understanding of the problems, possibilities, and politics involved in the facilitation of this

type of learning experience were obtained. This chapter will discuss those insights. The

following criteria will be discussed as they relate to the three outlined objectives of the

study. The findings outlined in this chapter are based upon the analysis of the collected

data according to traditional methods for qualitative research as described in chapter three.

Pre-Considerations of the Study for the Reader

Prior to the review of the findings, it is important to point out any possible issues

having potential bearing relative to this study for the reader to consider. Some of these

issues will be stated in order for the reader to interpret their own assessment of the

findings as described by the research. These issues were identified as the study progressed

and are considered as findings.

The researcher, previous to the study, had been closely associated with most of the

student participants involved in the study. On several occasions he had been their

instructor in other courses. Brad had been a previous student of the researcher in two other classes. Jeff had been a prior student of the researcher in one other course. Judy had been a previous student of the researcher in three other courses. Ann had been a previous student of the researcher in six other courses. Bill had been a previous student in five other courses. Stan, Jim and Don had not been prior students of the researcher. The researcher served as the educational counselor for all of the students and had been substantially involved in the determination of their educational goals. Going into the project, the students were extremely positive, and they held a certain amount of high trust and esteem for the researcher as a teacher.

Many of the comments, journal entries, and portrayals might have been done out respect for the researcher and not totally addressing the nature of the learning at hand. The researcher's positive attitude about the study and his work ethic might also have had a positive influence on the attitudes and performances of the student participants.

Because of the small number of subjects in the study, eight total, could have restricted the amount of quality input from the student participants. Not all of the students kept the required detailed student journal. Even the submitted student journals had many entries that were not pertinent.

Some of the personal interview sessions were conducted solely by the research assistant hired for the study to facilitate the video taping and to add personal documentation. During these personal interview sessions, where the researcher was not

present, the interviews may have lacked probing questions that the researcher might have

asked as compared to those asked by the assistant.

Results Relative to Objective 1

Objective #1

To explore what possibilities progressive education, using experiential learning

based on awareness and service learning, could have upon community college students

as an alternative to learning.

Off-Campus Realistic Environment

Guthrie City had been leasing space from a property owner or landlord in one of

the historic buildings of the downtown area until their new City Hall was finished, slated

for completion in September 1996. The building that they leased was very typical to most

of the buildings in the area. It was built of brick construction, fifty feet in width, seventy-

five feet deep, and three stories high. The three story building was constructed around the

turn of the twentieth century. The city offices housed in this building were the city

planner's office, city engineers, and the city attorney. It was called the Guthrie City

Annex Offices and it was located on Division Street just east of Oklahoma Street. Next to

the city planners office on the third floor was about 800 square feet of additional vacant

space previously used for offices. Guthrie City had arranged with the landlord to let the

OSU-OKC architectural group use this space during the summer of 1996 to do the

architectural study. The area was divided into three rooms. There was an entrance area

with a large corridor about six feet across that was furnished with 3' x 6' tables and used

for document throw space and one drafting table for a work and cutting area. Another

room which was about 12' x 12' in size became the computer-aided drafting and design

area. In this room there were four CAD systems and a plotter set up. The third and

largest room which was about 20' x 20' in size incorporated the major working area. In

this room there were three drafting tables, around the perimeter, the middle portion was

reserved for building the model. There was only enough space in this room to have two

sections of the architectural model set up at one time, as each of the five sections were

4' x 8' in size.

From the beginning of the study, the student excitement was apparent as they

prepared to physically be at the project site. The opportunity to establish a realistic

working environment, simulating an architectural office, created a sense of true worth of

the project for the participants. The sense of reality, working on a real project in a real

office with real objectives, inspired the students to become sincerely interested in the

learning at hand. These observations were made during the first focus sessions. The focus

group sessions were captured on video by an independent research assistant. Brad and

Jim, on video, visually expressed excitement to be at the project on site. Ann, in one of

the first focus group session covered by video, stated that "even though the commute is

difficult it is more important that we are here in order to experience the project." Ann

stated that she "was excited about being here in Guthrie. It is such a good thing to be able

to just go out the door and be at the project. Whenever I want to look at a building, take

a picture, or get a measurement, I am already right here at the site." Jim also expressed

excitement and appreciation for being at the site. He stated that "We couldn't be in a

better place to do this job. I have been involved in construction for twenty years, and I know the importance of being able to physically be at the site. It is just great to be here. I am excited to do this project." Don, in his daily journal, wrote this about the first day:

> The first day of the Guthrie experience we gather with the instructor and students and we shared a little about our backgrounds and I seen a room with great potential and dreams and I realized there's a lot I needed to learn and I welcome the challenge. It's a new world for me, as I listen attentively, my mind began to open up and learn from the other students.

Brad, in his journal entries wrote the following about the beginning of the project; "We moved into our place. Very excited . . . our accommodations are outstanding."

As the concepts of a progressive learning situation were explained to the students, they were impressed with the autonomy that they were to be given in the learning process. Jim stated, in a personal video taped interview, that "the positive aspects of this project were getting a taste of experience in the field and what that might be like, hands on experience. Also, gaining an appreciation for the historical value of the town." He further stated that "I think that a class like this should be required." Brad indicated in a journal entry that "progressive education is the greatest education experience I could imagine!" Jim, from the video footage, stated that "I like this project very much; I'd rather do this than go to work!" These expressions by the students reflected the attitude that was gained as a result of being adapted into a realistic work environment outside of the traditional classroom.

The researcher's journal entry written during this time also observed a change in attitudes as the students adapted from a traditional setting to the Guthrie location.

It is interesting to observe the excitement among the students as we set up our space here in Guthrie. Everyone seems to have a positive attitude and works together trying to get all of our furniture and equipment organized. There is a sense of anxiousness, excitement, and enthusiasm to get going on the project; this is different than the start of any traditional course that I have been involved in the past. Sure, the students for the most part seemed excited about starting a new class but the feeling here is different. I think it is because this is real and has the potential of effect on benefitting real people, including ourselves. There is something to being out of a classroom and into a community, involved in service learning, and engaging in true realistic learning activities.

Progressive Learning

John Dewey and others identified a learning method that evolves as students learn through experiences. Often in progressive learning there will be no set preconceived learning objectives because what the students are about to learn, how they will learn, and what direction the learning will lead to is not identifiable. In a progressive learning environment, learning occurs and knowledge is gained through an experience, then another door of the unknown is opened and is available for the further pursuit of knowledge. That door is then filled with light when still further knowledge is obtained through ongoing research and experiences opening other doors available for the further pursuit of knowledge, and so on. This evolutionary learning takes on a progressive nature working toward greater and even greater knowledge, thus being called "progressive learning."

There were several good examples of how progressive learning applications were effective during the study. One example was illustrated at the beginning of the project. The procedure for evaluation of individual student assessment was unknown when the project began. Because there were no set objectives, learning or physical, going into the

project, it was impossible to determine ahead of time what the procedures for assessment would be for the class. This learning environment was completely different from the traditional classroom approach where objectives are standardly identified well before the class meets and outcomes are predicted based upon these objectives. During one of the first focus group sessions, the researcher explained the dilemma of properly assessing all of the students for the grade required by the university at the end of the summer session. The problem was explained about the lack of preexisting criteria for grading associated to this class. Brad asked "Does there have to be grades given?" The proper answer to that question was "Yes, there are certain requirements that a university must follow, and this is one of them." Most of the students at that time could not suggest a proper method of evaluation that would be fair to all and also accurately evaluate each person's growth and activity over the summer. Judy suggested that "we all take note of each other's involvement during the summer and write it in our journals, no one else will read them except (the researcher)." As the summer progressed and as they observed the major participation of some compared to the lack of participation of others, occasionally this issue would come up again and the students would grapple with how they believed the assessment should be administered. In another focus group session toward the middle of the project, Ann suggested that at the end of the semester each student should put their evaluation of all of the other students into their personal journals and also assess a grade value to each as they see are appropriate. She stated that;

> This group is a combination of many different experience backgrounds. It would not be fair to judge people by what they knew at the end of the semester because we have so many different experience levels in our group. It would be more fair to judge people on their efforts.

Their journals would then be submitted to the researcher at the last day of the project. All of the other group members present agreed that this would be an effective and fair method of evaluation. The researcher then stated that he would look at the various submitted grade assessments from each student and then subjectively assess a final grade based upon the student's recommendations and also upon the researcher's observations. All of the students agreed with this proposed grading method and a consensus was achieved. The learning process involved with the arrival of this conclusion was progressive in nature. At the beginning there existed no concept on how to assess grades. The group, through a series of conversations, reflection, litigations, observations, and over a period of several weeks arrived at a suitable conclusion on how the assessment procedure should occur. This was then instituted at the end of the grading period.

Another example of progressive learning was the process of awakening to, the development of, and the administration of the community values survey. In one of the first preliminary group focus sessions, the question was brought up about what exactly the final presentation should represent. Ensuing discussions suggested that the presentation should reflect the wants and needs of the Guthrie community. The question was then raised about how to assess what the needs of the community might be and identify the valued concerns for the historical downtown business area. Judy was very interested in this aspect and suggested that a survey needed to be taken. She said that "In order for us to really get a good understanding of how this town clicks, how it thinks, and what it thinks is important, we need a survey. Then we can go on with our design." Brad, from the video footage, indicated that "it (the survey instrument) would be really important and our major tool for getting feedback from the community." From that suggestion the students

proceeded to develop two different surveys, one for community members in general and another for the downtown business community. Jim stated that "We really need two different surveys because we need to find out exactly what the business people affected by our proposal think and also what the general population of Guthrie thinks." The question was raised on how to create a survey that would render the information necessary to identify the values of the community. Brad stated "There must be a way to philosophically create a survey that would address our questions, but just how do you do it?" The researcher at that time conducted a mini-workshop on how to develop a survey instrument. Brad was asked by the rest of the students to act as a facilitator for developing the two survey instruments pertaining to this project. During the ensuing discussion for the development of the survey instruments, Judy stated that the group "had done a substantial amount of research to that point on the historical values of the community." Research was another component of the initial stages of the project that everyone had decided was particularly important. Therefore, the student participants had spent a lot of time at the library, in the museums, and conducting interviews with the community members to find out any information that might be applicable to the project proposal. This new found desire and commitment to research was another aspect of progressive learning associated to the study. Judy said that the fact that "the National Historical Society had registered more than one hundred structures in Guthrie indicated a certain amount of value for historical preservation of the architecture." The historical aspects of the community became a major value for the development of the survey. Another point brought up in the discussion was the desire implied by the municipal officers for the potentials of tourism to Guthrie. Tourism and the possibilities of the increased

community revenues generated by tourism were identified foci for the surveys. The surveys, based upon the identified foci, were developed, refined, scrutinized, and redone until a satisfactory rendition evolved. Assignments directed by the students were then assumed and the two surveys were administered. The students decided to divide up and went out either individually or in groups of two. Some of the students would go from door to door at the downtown business area and ask the business people questions specified on the survey. The other group would address the citizens of Guthrie and ask them questions as they entered the grocery and Wal-Mart stores. This entire process was conceived, developed, and administered by the student participants as they became aware of the needs in a progressive atmosphere. From the researcher's personal journal the following was noted about the survey:

> Brad led a discussion on what our survey instrument should focus on and what it should attempt to reveal. A consensus was achieved and assignments were accepted to publish the surveys. Jeff accepted this task and committed to have them completed and ready to administer by tomorrow. We agreed that the values of two cohorts were necessary in order to begin our proposal attempt. Those cohorts were the residents of the community and the business owners of the downtown area.

Don wrote in a journal entry the following about his interpretation of the experience of developing and implementing the survey:

> We had a meeting and got questions together for the survey . . . We went into the businesses and started short interviews with business owners. We went to about fifteen businesses. The response was really good. Listening to the people of Guthrie you could see the interest the people had in this project and how some people had the same ideas in progress and how to improve the town and to bring back its history.

Judy wrote in her journal information gathered from the surveys and research interviews with the community:

I'm excited! Seems like it's going to be a lot of fun. I was hot and headachy but got a lot of info and history about the city. Interviewed several shop owners who all want to see the city improved. I'm disgusted from the local gossip. There is a lot that we could propose to improve the city and bring in tourism but the money people have a lot of restrictions for business owners to adhere to. But we did dig up a lot of history and local hearsay. For instance, Guthrie, so they say, was a mafia town. Some say that there are underground tunnels that led to underground casinos, saloons, and gambling dens. There was even an opium den, supposedly, beneath the old newspaper building. The Tilly House was originally a house of ill repute complete with tunnel entrances and exits during prohibition. Even found the site of the Carriage House beneath the Dollar Store.

At the beginning, the students were unaware of how to begin an architectural proposal for the city of Guthrie concerning their historic downtown business area. As they pondered and struggled on how to develop a proposal, they realized that they needed to know the valued concerns of the business community and the people in general. This understanding fostered the motivation to develop a survey in order to find out the valued interests and concerns of the community. The students needed and desired training on how to develop a survey instrument which was provided in a session by the researcher. The students then collectively developed, published, and administered the survey to the community of Guthrie in two cohorts, the downtown business community and the citizens. From the information gathered by these surveys, the group was then better able to understand the necessary direction of the architectural proposal, and they were all guided toward further research studies for the proposal. This process was very progressive in nature and involved a step by learned step development in order to arrive at further knowledge and additional understanding. The group came from knowing nothing about how to proceed to achieving a very concrete understanding of the tasks that were before them through a continual progression of gained knowledge and understanding.

Experiential Learning

Learning can be effectively accomplished through experiences whether those experiences are gained in everyday life events, work related activities, interactions with other people, or purposely through education functions. As people experience things they naturally gain a greater understanding. One example would be of a novice driver who was navigating a difficult part of the highway for the first time. There would be sharp curves and steep hills to negotiate as the driver traversed through the difficult stretch of road. However, the next time the driver attempted the tricky stretch of road, the difficult curves and hills would be more familiar because of the previous experience. Further, the driver would be more familiar on how to negotiate sharp curves and steep hills on any future stretches of road. By experiencing different aspects of life, learning happens naturally. Many of the principles that were learned in this study were the result of learning by experiences.

One of the possibilities of the study and an example of this type of learning came after the concept of creating a scaled model for the final presentation was agreed upon. The students decided upon the incorporation of the actual area of the historic downtown district of Guthrie into a scaled model. From the western most part of the area which included the old Sante Fe Train Station to the eastern most part which took in the site of the old Bath House, long since torn down, represented a significant change in physical elevation. The students decided that in order for the model to be a true representation it would need to reflect the actual elevation grade changes. Surveying equipment was then brought out from the OSU-OKC campus. Students became involved in the process of

surveying to establish actual elevation grades in order to realistically build the scale model. Actual comments by the students during this process resembled "I am glad to have this experience," "This is a great opportunity," and "Teach me more on how the survey topography plays a part of a project like this." During the time spent in shooting elevations of the downtown area, there were continual questions asked about the significance of what was taking place and also how it related to our project. Students asked if this process was typical of any similar project in architecture. The students that participated in the surveying were Brad, Stan, Jim, and Don. All of these students were given the opportunity to assist in all of the operations of shooting elevations. They all took turns in taking the survey notes including setting up where the shots were to be taken, running the rod, and taking the shots through the instrument. The students all speculated what the difference in elevation would be from the lowest point to the highest in our survey. The estimates were anywhere form thirteen to twenty feet of elevation difference. The researcher stated that he thought that it would be closer to fifty feet of elevation difference. The other students sort of laughed and said that they would be very surprised if it was. Brad said that"It doesn't look like it is that much rise in elevation." Jim followed and said that "I have been involved in construction for a long time and I'll eat my hat if it's more than twenty feet." When the survey was completed and the group had turned back to the point of beginning, they all went back to the office to calculate the closure and verify the differences in elevation for the area shot. After the group was shown how to calculate the elevation differences, it was determined that the closure was valid within three hundredths of a foot. The researcher indicated that traditional acceptance of an elevation shoot is considered valid if within five hundredths of a foot.

The greatest difference in elevation of the area of concentration was then determined at +/- 46.00'. All of the involved students were surprised but readily accepted the survey as actual. They were very interested in the process and curious as to why their own estimates were so far off. It was explained to them that the term "level" is an actual state and often we cannot see from our own perspective or understand what true level is. When the group was standing on an incline looking at the top of the hill, it was difficult to actually see the true value of level. Therefore, we do not always obviously see what is truth or reality.

Jim stated that "This experience was one that connected many of the things I have seen in the construction business but had not yet understood." Stan said "It was exciting to see how it all works and how they get information on the lay of the land." Brad indicated to the others that "This information can now be adapted to our model and it will now be a true representation of the actual grades of our project. We can build the model to reflect this." Brad stated in his journal; "Shot elevations of downtown Guthrie. Learned how to survey landscapes. Outstanding!" During a focus group session, which was caught on video not long after the physical survey was done, Jim, a man with an extensive construction background, stated that he "learned to do a topography and close; that is something that I had never done before and really didn't understand how it fit into the scheme of things." Don wrote in his journal about the experience of doing the physical survey and how it affected his learning experience:

> When (we) got back we discussed the survey and the elevations. It is then that we really realized the size of our model and how large it would be. I watched as (we) worked the close on the elevations and measurements. I watched how they did the formulas for closing and as I saw my mind began to open up and when we ended

the day I realized there's so much I needed to learn. I'm ready to get rolling, and I hope my ideas just could play a small part because most of all I'm here to learn.

Captured on a video interview, Don also said that "It's all new for me so I'm just starting from the ground up. I'm just here to learn and pick up new ideas and learn from each other. Its not just one person doing everything, everybody has a part." As the students participated in the elevations survey, calculated the elevational difference, and associated it to the model about to be built, they were able to realize and grasp the importance of the process just completed. It was through the experience of surveying elevations that the students were able to progress onto the next part of the project and build a model which reflected realistic grade elevational changes.

Many other experiences similar to these happened during the course of the study, some less significant some more, nonetheless all were felt to be important learning opportunities. Chickering (1977, p. 18) said that, "When ideas are used as hypotheses and tested in action, their significance and the attention given to them is greater than when they are simply memorized or left as unexamined abstractions." The significant forces of the learning being accomplished in these situations were a result of "hypotheses . . . tested in action." In these examples, learning became a reality for the students.

<u>Awareness Learning</u>

Progressive learning principles are essentially similar in nature and highly related. Awareness learning, which is a primary principle of progressive learning, is acquired by students through experiences. As the student engages in learning experiences he/she becomes *aware* of certain issues that were previously unknown. Through the various

experiences the students gain an awareness of learning issues which cause them to know

and understand more, to gain an increased desire to know more, and then to become

more involved in additional experiences which generate more awareness and so on. This

then becomes a very progressive learning event. Awareness learning is the learning that

takes place as the student comes to understand different issues through experiences and

thus becomes aware.

Several examples in this study illustrate the incorporation of awareness learning.

At the beginning of the project there existed a certain amount of unsurety as to what

exactly the project should accomplish and what the proposal should entail. Another

possibility of the study, which involved awareness learning, evolved as the process of the

architectural project progressed. The students became aware of important related issues

as they were emersed into the research and interactions of the project. As the experiences

sequenced through the development of the architectural proposal, certain awarenesses

were gained which encouraged the students to progress into other experiences and gain

additional awareness. The researcher wrote in his personal journal this entry about three

weeks into the project:

> This week has certainly been a solidification time for the project, both in
> architectural aspects as well as learning aspects. The model along with the
> proposal is progressing very well and contains some very professional qualities. I
> believe that the city of Guthrie will be pleased with the quality of the work. The
> students seem to be finding themselves and are gaining understanding as they
> progress through the research and project. This seems to be a great building and
> growing experience as they learn more and more each day. It is amazing how each
> thing that they learn guides them toward the next direction to pursue toward the
> project presentation.

Judy stated in an interview that:

> It is really interesting how you come in the morning and do not know what you will be doing but by midmorning you have a perfect idea of what needs to be done. I only came to understand this by talking to others, discussing our goals, looking at where we had been, and visualizing where we needed to go. I can't believe how things just fall into place the further we get into the project.

Brad, in one of his journal entries said:

> I just keep in mind that we don't want to look back at this and say we could have done better if we had more time. We have a good chance to create something big! I can see that is going to require a serious effort on everybody's part . . . what makes this unusual is that everyone is responsible to each other.

In a focus group discussion, at about the time the feeling of confidence began to emerge and become dominate, Brad stated, "the confidence began to appear when we began to see progress." Ann added, "It began to pick up when we saw the first board being developed and it is hard at the beginning. When things began to take shape, we began to pick it up." Brad stated that he thought that "we were all now rising to the challenge and seeing what we thought we could do in the beginning." Jim, in a personal interview on video tape, stated that "in the beginning there seemed to be a lot of confusion about what needed to be done, and who was going to do what, but now it has settled down a lot and operating smooth and everyone has pitched and working together real well. This is a neat experience." As a result most of the feelings of anxiety, unsurety, unknown, and unexpectedness that were expressed and demonstrated at the beginning went away. The attitudes and culture of the participants began to take on a feeling of confidence. Their goals seemed to have real significance and purpose. They were beginning to understand the true purpose in this project, a purpose that they helped define.

Another example of learning through awareness, although a simple application, was the process that evolved in the building of the individual boards for bases of the model. Because of the great differences in elevations of the area of concentration, the model bases were to reflect these elevation differences. An evolution of understanding and knowledge through awareness ensued on the best way to construct these bases for the model. It was decided that on the first and second of five bases, the second representing the greatest difference of elevation change, that layers of 1/4 inch foam core board could be used and staggered back by layers to represent the elevation differences. Since the scale factor on the model was 1/8" = 1'-0", each layer of foam core would represent 2 feet of elevation difference in real life. Then to smooth out the stepping effect of layers of foam core board, applications of wall joint compound were used. By the time the second board was finished and moved out to a storage room, it was significantly heavy. Also, the students had noticed that a great deal of foam core board, which was expensive, had to be used to create the base. The students discovered that the bases were very time consuming to create using this layering system. On the third base, Brad and Ann went about engineering a better alternative to build the remaining bases. They did this by constructing tapered supports, representing elevation differences, and laying two layers of foam core board on top of the tapered supports. This method proved to be much faster and far more conservative in the use of the expensive foam core board. The researcher in his personal journal wrote:

> It was interesting to observe Brad and Ann layout the base for the third board for our model. Brad seemed to take charge and give directions to Ann in the process. Ann tolerated taking directions but uttered a frequent 'Yes sir' during the ordeal. I don't believe that Brad even realized her cynicism because it was so inconspicuous. It is really amazing to me, now that the goal has become common

and shared, how each participant realizes the goal and eagerly works toward it. It is also amazing how they learn from each other. We have participants who possess qualities and experiences in a variety of areas. The participants sense these qualities and identify with it as potential for their learning. They draw upon each other to learn and grow. The experiences that they share give them further understanding which inspire them to greater knowledge and greater desires to do additional enhancements to the project presentation.

Many of the students had no previous experience with architectural model building. Those who did were limited in their experience. This scenario provided another example of awareness learning in the study. As the students progressed with the building of the individual scaled building replicas to be placed on the model bases, they realized that their current method was not effective or efficient in time or materials and they needed to change the way that they were building them. In the beginning, much of the time was spent through trial and error determining the best way to build the model building replicas. By the second week the students had experienced, conversed, pondered, and re-experienced to create a very expeditious and professional method of building scaled model buildings. Colored mat board was used as the base for all of the buildings and then by using various colored pencils the students could draw much of the decorative aspects onto the facades. In the beginning the students were cutting every detail into the facades which was very time consuming. However, they learned by trial and error experience, gained awareness of the difficulties and potentials along the way, and developed a scheme for building the scaled building replicas that was more time and materials efficient and looked very professional.

There were many aspects of progressive learning similar to these examples through awareness that became standard during the study. The possibilities developed through awareness learning, experiences, and understanding happened as a result of the learning

activities which evolved during this project. It was through the awareness that students

gained while involved in progressive experiences that encouraged them to see further

understanding by experiencing additional possibilities and becoming more aware and

therefore, gaining a greater understanding.

Team Work and Collaborative Learning

A progressive atmosphere within a team setting began to emerge as the students

worked together collectively establishing a process toward completion of a project which

they now indeed owned. Teamwork reached a pinnacle during the project. Participants

seemed to work together creating each progressive step to take into the evolving project

destination. Jim, in a journal entry wrote this about the understanding through

collaboration that began to occur as the progressive process continued;

> We, the model builders, are about to catch up with our Master Plan view. This
> *prompted* Don and I to go out in town to get more measurements of the buildings
> so that our scale of the town will be more accurate. I predict that Don and I will
> need to spend about 4 hours more getting measurements after this morning to
> complete the Master Plan view.

Don in one of his journal entries also identified the positive aspects of working in

teams while awakening and understanding of the project moved forward, he wrote;

> Me, Jim, and Stan walked through the downtown area measuring the sidewalks
> and taking a few pictures until lunch. As we walked I could see the beauty
> underneath the surface of the buildings covered by metal facades. After lunch Jim
> and I cut the 2x4s for the legs of the platform model parts. As the model was
> forming the neat thing was is how it all worked together! That is a sign of a good
> project all things working together for the final goal.

The group created an assortment of different sub-teams which were organized to

facilitate different team identified tasks, and all of this done with the final goal in mind for

completion. As the progress of the project continued there would evolve different needs

for sub-team involvement. The students would organize themselves into these sub-teams

to meet the needs of the project. For example, at the beginning of the project there were

many different needs identified for the development of the final presentation. Some

students were organized to do historical research, others were designated to gather

physical information of the buildings by measuring and taking pictures, others were

assigned the task of gathering materials to build the model, and still another small group

worked on putting information into the CAD system for drawings. These sub-team

responsibilities changed as the project progressed and other needs were identified. There

existed a true collaborative atmosphere as the students depended upon each other to fulfill

their respective responsibilities in order to progress. The students seemed to draw upon

each other's strengths and depended upon each other in order to individually grow and

also to complete the goal. Some of the students were more adept in model building;

others had significant construction experience; some students were further along in their

architectural studies and had a deeper understanding of the subject; also the researcher

was an experienced architect and was asked on many occasions to give input on the

project. Crain, Hopkins, McMillion, Stern, and Stone III (1994), stated that group and

team activities in learning prepare students socially as well as academically. This study

demonstrated that teamwork can create unity toward a collective goal. Brad, caught on

video, indicated the importance of proper communication and that, "We should each speak

for a minute to our group every week, because we are all working in different areas it is

easy to miss something or leave something out and since our time is so limited we cannot

afford to make any mistakes."

Because every participant had unique qualities and experience to give to the project along with their individual goals to achieve during the project, everyone involved gained appreciation for each other and sought out expertise and strengths from other participants. Every participant seemed to create a nitch for themselves as to the areas in which they could competently give to the project. This created a cohesive group of important single entities working toward a common goal. The group was unique in its chemistry because of the diverse components. They were different than any other group, yet competent in the development of this project.

The group was composed of different ethnic backgrounds. Of the eight student participants, one was African American; two had significant Native American heritage; one was a native of Brazil, and the other four were white Americans. However, there seemed to be no racial connotations or references during the project. In fact, there was never mention of any racially related discourse that the researcher ever witnessed and no references of any kind in the student journals.

The group of students consisted of two females and six males. There were no recognizable differences noticed by the researcher as to how they associated and interacted with each other. The work environment was non-gender specific and the students treated each other equally, gender not being an issue. The students were more interested in the personal strengths that each other had to offer and not whether they were male or female. An example would be when a small group was formed in order to shoot pictures of each of the building fronts for the project. There were three people in each of the two groups to do this task. Each of the two female students were in different groups. The assignments of members to the groups were based upon experience criteria not

gender issues. In one group Ann did all of the camera shots because it was her camera while Stan stood in the pictures to be taken against the building because he was exactly six feet tall and could be seen proportionate to the height of the building. In the other group however, Jim took the pictures because it was his camera, and Judy stood in the pictures because she was exactly five foot six inches tall. It was observed that there seemed to be no differences for personal treatment in the group because of gender issues.

The group as a whole had a large range in age differences. Brad, Jeff, and Stan were all in their early twenties. Jeff and Stan especially seemed to be immature and were more interested in their social lives than the project. Brad, however, who was also in this age category, was very involved in the project. Judy was in her late thirties and already a grandmother. Ann was in her early thirties. Bill was in his late twenties but was involved in his job and other responsibilities and did not participate as much in the project. Jim was in his mid forties. He had been involved in construction for twenty or more years and was very dedicated to the project. Don was in his late thirties and was also dedicated to the project. In general, as an observation, the students who were older and had experienced more responsibility in their lives with jobs, families, and school were more dedicated to the project and gained more from the experience. The younger students, for the most part, did not fully grasp the reality of the project or reach for its full potential. Most of the younger students reached for only what they *needed* from the project and were not interested in more. The older ones reached for every thing possible that they could gain. For example on many occasions Jeff would leave the focus group discussions and team meetings out of boredom and lack of interest. This action would agitate the older group

members. Jeff and Stan often would leave the project and be gone for a few hours doing what they called just "goofing off!" This also irritated the other group members.

The factors of race and gender did not have an observed effect upon team work and collaboration; however, age differences did affect somewhat the collaborative efficiency of groups. The concept of teamwork and collaboration in this study was a significant part of the working concept. Many of the problems solved, experiences gained, and understanding acquired came from a collaborative effort. Teams were an important factor of the study.

Global Learning

Most traditional education courses are set up specifically with pre-established objectives for learning that concentrate on an area of study. Learning that has global potential employs a situation where many aspects with multiple applications can be learned during the study period. The opportunities for global learning are generally obtained through learning experiences that provide a great variety of possibilities in a realistic environment. When students are placed in a realistic learning environment where the potentials for learning are multiple, then they are able to partake of the variety of learning possibilities available to them and learn globally which would be different from traditional practices in education.

A major possibility of this study was the potential for learning with global ramifications. In most traditional college courses, there are finite objectives to be met and students will matriculate through a series of traditional courses in pursuit of a complete understanding of the subject being studied. An example of this in a traditional technical

education setting at OSU-OKC (see Appendix D for several examples) would be the flow

of students through a pre-determined selection of classes in order to gain the desired

insight and competence in each course before going on to the next course. A typical

architectural student for example would start off in ARCH 1223, Construction Drawing I

and learn the basic principles of drawing and applications to architectural design. Then the

student would progress through a series of increasingly more difficult and complex

drawing, theory, and applications courses until he or she was considered proficient;

therefore, gaining a thorough understanding of the concepts. Traditional methods of

learning are lock-step in philosophy and rely upon a step-by-step application in order to

learn a whole. The learning ramifications during this study, however, were global. The

students were able to learn a wide variety of topics at the same time and actually see the

correlation between the topics as the project developed. For example in one typical day

on the project for this study, a student would have been outside gathering physical

dimensions and information, inputting the information into the CAD system and assessing

design criteria, consulting with other students for design direction and control, building on

the model, visiting with news media personnel, doing research on the historical aspects of

the community, meeting with city officials, gathering information in a values survey, and

possibly many other learning activities. These learning opportunities collectively are not

found in the traditional classroom. A common void in the traditional method of learning is

the understanding of the connections between subjects taught in classes. Brad, in a

personal interview caught on video tape, stated that: "You could never get this kind of

education from a class. I have been able to be involved in so many things during this

project that it would be impossible to learn it on campus. I hope that I can have other opportunities like this."

Judy stated that she "would be involved in this kind of learning all of the time if it were possible. I have learned more in this summer than in all of the other classes I have had combined." Ann said that she had "enrolled in this class even though I have already graduated so I could gain the experience. I felt it was important enough to take this course just for the sake of taking it."

One aspect of the global effects of learning in this project was that the project naturally gained a lot of publicity. The community was naturally curious of the group when they noticed the students on a daily basis around downtown taking measurements, surveying, conducting a survey, and taking pictures. Several of the citizens asked questions about the nature of the project. Because of the curiosity and general interest being created by the group physically being in Guthrie, several news agencies came to visit the project home base to gain information on the architectural study and proposal being developed (see Appendix B). The students were able to then gain the added experience of dealing with news agencies, learning to express their conceptual ideas and citing research topics, survey results, and collaborative efforts in a clear and effective manner that could be understood by the public through the news agencies. On one occasion about three weeks into the project, a local newspaper reporter came to our Guthrie location and asked to interview and speak with the students. After the visit, the students were buzzing with questions and comments on this experience. Brad stated "I'm not sure that I like talking to reporters. They sure ask questions that seem to be controversial." Jim said "Next time I talk to a reporter I will have rehearsed what I am going to say. I will try to guess ahead

of time so that I won't be surprised." This was a good opportunity for the students to, using verbal communication skills, express their interpretation of the project. In a publication by the Guthrie Daily Leader (1996, p. 1), the following was written:

> History is the focal point of a cooperative project between OSU-Oklahoma City and the City of Guthrie.

> Started last November, the project proposed to the Guthrie City Council was a summer semester project in which a group of OSU-OKC architecture and construction students would come to Guthrie to survey, evaluate and present a proposal on what could be done to further enhance the downtown area.

> 'Enhance is a crucial word on this project,' says Kevin Burr, OSU-OKC Engineering Technologies Division head. Brad, a student said 'We were out surveying one day and a lady said, your not going to widen the streets are you? I explained that the OSU-OKC project would only make recommendations to preserve and enhance what is already historical and beautiful.'

> Guthrie has provided about 800 square feet of office space near the city office in historic downtown. In this space OSU-OKC has set up an operating architecture shop with drafting tables, four Computer Aided Design (CAD) systems, a plotter and more.

> The group began their work by doing research on the history of Guthrie and created a survey instrument to determine community values. Two different groups were surveyed: downtown Guthrie business people and a random sampling of Guthrie citizens. Both groups surveyed were strongly interested in economic development of the downtown area through tourism. This data provided the group with a direction and focus.

> The project goal is to provide city officials with a formal proposal at the end of the semester. This will serve as a master plan for potential restoration and redevelopment of downtown Guthrie.

> Included in the plan will be a three dimensional model and architectural renderings for existing and proposed structures. Also, included will be possibilities for long-term development of the downtown area.

The experience of dealing with public news agencies was something that the students could not have gained in any traditional classroom, but this is an issue that is dealt with quite often in the field of architecture. By having the opportunity to interact with the

news media, the students gained another of many learning aspects of the global

possibilities of the Guthrie project. In the researcher's journal the following was written:

> Many things that couldn't be learned in a classroom are being learned by the students this summer. Today a reporter from the Guthrie Daily Leader visited our flat. This was something that many of the students were not prepared for, but I believe that they did very well at. It was interesting to observe their reactions to the reporter. Jeff and Judy just left to avoid the situation. Brad and Ann however, were very congenial and discussed the project in depth. Jim and Don came back from measuring halfway into the interview and readily participated in the discussion with the reporter. I sensed a level of pride from the students as they discussed the project and the possibilities for the city of Guthrie. The reporter was able to see the first two boards of the model and seemed very impressed with the quality. This also made the students proud. After the reporter left, the place was a buzz with excitement. I was able to explain to them that this was a very normal part of being an architect as they have read about many architectural projects and recently about the Oklahoma City MAPS project. Many of the students indicated an interest in gaining better communication skills which we committed to work on as a group in preparation for future news personnel visits.

Another example of the global possibilities of the project was when the students

developed and learned communication skills through experience in preparing for and

giving the formal presentation. The formal presentation to the City of Guthrie took place

at the Territorial Museum in Guthrie, Oklahoma at 6:15 p.m. on September 17, 1996.

This opportunity gave the students the experience of presenting their ideas to municipal

officers. The mayor along with several other city officials made comments and asked

questions regarding the research that had been done and the recommendations that were

made as a result. This meeting was open to the public and several of the Guthrie

community members were there to observe. Because of what they had learned from

dealing with the news agencies, the student participants prior to this event prepared

extensively. They were concerned that they would not be properly prepared to be in front

of dignitaries and asked for additional help on presentation procedures to be given before

they were to give the presentation. In three sessions of approximately one hour each, the students were given instruction on what to expect during a presentation, how to prepare for an architectural presentation, and how to dress, act, and speak at a formal architectural presentation. Also as a part of the training, the students were shown a video entitled "Design Wars" which follows five architectural groups as they prepare and give presentations for a design competition for the new Chicago Library. The desire by the students to be taught on architectural presentation procedures was very progressive in nature. They were somewhat intimidated by the news agencies and that experience prompted them to gain the desire to become better prepared for the future. The experience generated an awareness which prompted a desire to gain more knowledge -- progressive learning.

As part of the formal presentation, a written technical document was prepared to identify in writing all of the suggested areas of interest revealed by the architectural study. The students wanted to be able to effectively write technical documents. Further instruction was given to the students on how to prepare formal architectural technical presentation documents. The student participants became very interested in how to prepare a formal presentation and develop a formal written proposal. The anticipation of actually doing these tasks created a certain amount of anxiety and stirred a greater desire to learn. Thus, the instructor prepared small seminar sessions in both areas developed to teach them these skills. Again, another example of progressive learning. Stan was very nervous about the presentation he stated, "I will just do the work and skip the presentation." The others however would not let that happen. Jeff in response said "If I have to do it then we all have to do it including you." It seemed that all of the students

were very apprehensive about getting up in front of several dignitaries and making a

formal presentation. The seminar sessions conducted assisted in alleviating some of the

anxiety, but there still existed a lot of fear about doing the presentation. After the

presentation had been made, the fear left and a genuine sense of pride emulated from each

of the students. They had intensely prepared and were able to respond intelligently to all

of the questions asked. They had gained, not only the knowledge of how to prepare, but

the reward of successfully delivering the presentation. From the researcher's journal the

following entry stated:

> I was so proud of the students today. We made our formal presentation to the
> City of Guthrie at the Territorial Museum. They confidently and competently
> addressed each of the concerns, questions, and issues that the city officials asked
> them. We took turns explaining each of the different aspects of our proposal and
> each student was responsible for a particular aspect of the presentation. Stan was
> very nervous but after the meeting he jumped into the air and yelled 'Yes!' There
> could not have been a more positive experience for these students. They prepared
> very hard and studied all of the potential aspects of the study in order to answer all
> of the possible questions. They worked hard to be organized. They worked hard
> on the written proposal and learned a lot about preparing one. It was good to see
> the amount of growth in these people from doing this kind of a project. They truly
> have grown.

The global aspects of preparing for and giving the formal presentation can be

collected into several categories including verbal and written communication skills, public

speaking, critical thinking, problem solving, business etiquette, and several other related

topics. These experiences were gained in a very realistic scenario and provided the

students with awareness and possibilities that could not have been acquired in the

traditional setting.

An additional possibility observing of the global effect of this learning situation

was illustrated previously in this paper in the surveying example. Surveying in the

traditional setting is a separate course which incorporates the emphasis of shooting and calculating elevations along with other aspects as well. Generally students will be given certain objectives at the beginning of the semester to learn the competencies desired. The course will then systematically address each of the accompanied objectives. In this instance however, only the elevational aspects of the survey were addressed and directly related to the project being accomplished. Therefore, the students could immediately see the relationships of the survey data and its implications to the final architectural project and presentation, thus acquiring global learning aspects. Students were able to realize and draw the connections between surveying and architecture because they became a part of the whole or "global" process.

Don, who was a new student to architecture wrote in one of his journal entries about the global effects of learning and this experience. These related thoughts reflect upon one day's involvement on the project and what he was awakened to and learned:

> Jim, Brad, and me started to gather the measurements. We started down by the old Santa Fe train station. As we began to measure around the train station you begin to see the potential by this building. Then we worked our way to Oklahoma Avenue, measuring buildings, sidewalks, alleys, and driveways. We stop about 11:30 a.m. and charted the measurements and as I look at the model coming together, I could see the importance of the measurements. After lunch I was watching Judy work on the CAD system to draw the Santa Fe railroad building. It's so amazing how technology has come. I continued drafting and drawing the Master Plan view with Jim. With the time we spent on the measurements I am learning how crucial surveying is. And to see the surveying measurements to the actual model is an amazing experience!

When the students became involved with building a scaled model in order to represent their proposed architectural enhancements, they did not fully understand the mechanics of the model's preparation. One factor that became obvious immediately was the importance of duplicating the existing buildings as closely as possible on the model.

Horizontal dimensions were easier to acquire by simply measuring the footprints of the buildings; however, the vertical dimensions posed a problem, it was impossible to measure accurately the heights of the many facades for the model. The researcher suggested an old surveying technique of taking a picture with a person standing next to the building and then proportionately measuring vertically to effectively determine the height of each of the buildings, so one student would stand next to the building while the picture was being taken and then his or her height could be multiplied vertically to gain a somewhat accurate estimate of the height of the building in respect to other buildings. The facades would have needed pictures taken anyway in order to determine their exterior features for the model. This activity again presented a progressive learning application as the students gradually learned what needed to be done in order to satisfy the needed information dilemma. This experience was global as it contributed to the whole project. Students did not just learn objective by objective but had a good understanding of the global task and the components that were involved to reach the greater goal.

Another example of the global effects of learning was that the model was a true "scaled" representation of the downtown area. This involved the actual asbuilding, or measuring, the entire affected area and then converting three dimensionally this information in order to construct the model. The model was built representing a scale factor of 1/8" = 1'-0" in true life. The students learned how to transfer scales and calculate their differences.

During the project the students were also engaged in research which was another component of the global aspects of this learning project. Through the research studies, they were highly involved in history, specifically early western American history. Judy and

Ann both indicated, in personal video interviews, that they thought there wasn't enough time to do research and there needed to be much more opportunities for the research necessary to do a project of this magnitude. They proposed that time other than the project time, possibly before the project begins, be dedicated to research only. The students identified an important need related to the project which was to collect as much historical data as possible in order to ascertain the most meaningful enhancements for the proposal. From some of the research findings, the proposal suggested the reconstruction of earlier significant architectural icons that had been torn down (see Appendix E). The Old Bath House and the Hotel were recommended to be rebuilt in the proposal. The research component contributed to the global aspects of the learning project, another of several components learned to establish the learning whole of architecture.

The recommendations for the enhancement of the downtown Guthrie area were arrived at out of extensive research and study by the student group. These recommendations were then incorporated into a scaled model to provide a visual representation. It was important that the Guthrie City officials and the citizens of the community would be able to visually understand the concepts represented by the recommendations of the OSU-OKC architectural group.

In order for the students to gain an effective appreciation of the historic value of the downtown area of Guthrie, they realized that they would have to do a significant amount of research and study into its history. This was accomplished in several ways. The researcher wrote:

> It is just the first week of our project. The students are now busy gaining all of the historic research that they can for effective input into our architectural recommendations. The survey instruments to the business people and the citizens

is being done by some of the students. The Carnegie Museum seems to be a favorite spot for other students as it is full of historic data and artifacts regarding the history of this community. Ann and Don have spent many hours in the museum reading, searching, and learning. The Guthrie library is another favorite spot to do research. I have noticed several historic books around our flat, obviously from the library, which are historic representations of Guthrie. One of the favorite past times for Judy is talking to the old time residents of Guthrie. She and Jim particularly have gained a lot of 'undocumented' information by just talking with people. In all the group is gaining a very good understanding of this community and the history that is behind it. I told them today, and they have also learned in other classes from me, that the culture drives the architecture, and it is very important to understand the culture of the society to effectively interpret the architecture. They learned by doing research. They visited libraries, museums, talked with city and county officials, and also community members. It was interesting to see how much they learned and got excited about the research when it *applied* to something they were doing.

Judy wrote in her journal about information that she gathered doing research and talking with many of the old time residents of Guthrie. She stated that:

> I'm disgusted from local gossip. There is a lot we could propose to improve the city and bring in tourism but the 'money' people have a lot of restrictions for business owners to adhere to. But we did dig up a lot of history and local hearsay. For instance; Guthrie, so they say, was a 'mafia town.' Some say that the underground tunnels led to underground casinos, saloons, and gambling dens. There was even an opium den, supposedly, beneath the old news paper building. The Tilly House, which was originally a house of ill repute complete with tunnel entrances and exits during prohibition. Even found the site of the Carriage House beneath the Dollar Store. Also found out that there were several movies made down here. The gossip makes me want to move here and shake up this town. There is so much potential here being wasted. I did however, find some really cool history. I hate to say it but if they would publicize the jack that a lot of lawlessness went on in this town it might become a type of tourist attraction.

From their research the student were able to intelligently and effectively plan the most adequate architectural recommendations for the potential enhancement of the historic downtown area. The values gathered from the survey gave them direction on their recommendations. As a result the following recommendations were given:

- *Establish zoning requirements that reflect the evident historic values of the downtown business area.*

There were remnants of an era during the 1950s to 1960s where false facades of metal and fiberglass were placed on older buildings which drastically misrepresented the historic value of the downtown area. The students felt that zoning requirements prohibiting this practice and enforcing historic value was needed.

- *Put all overhead wires underground.*

The students believed that the above ground electrical and telephone wires distracted drastically from the historic theme that was beginning to be established in the downtown area. They recommended that these wires be placed underground.

- *Restore the original brick paver roadways.*

From their research the students realized that there had once been a beautifully laid system of brick paver roadways in the down town area. After further investigation they learned that many of the original paver roadways still existed under several layers of asphalt. Their recommendation was to restore the original roadways.

- *Incorporate a trolley system.*

The research done by the students uncovered that there was once a horse drawn trolley which later became electrical trolley system downtown for pedestrian transportation. Their recommendation was to reinstate a similar trolley system in the downtown area for tourists and pedestrian transportation.

- *Create a pedestrian only environment and build parking structures close by to facilitate excess parking needs.*

The students strongly believed that the historic building were built during a time before the automobile, and that allowing the modern car into its domain was stripping the environment of all of its historic values. They recommended that parking structures be built close by, keeping with the theme of the historic architecture, to facilitate any parking needs. They also suggested that the area be traveled only by pedestrian traffic. They recommended that the streets by supplied with planters, visitors stations, drinking fountains, restrooms, benches, and small park-like environments for pedestrian shopper and tourist convenience.

- *Encourage tourism to the downtown area.*

The students from their research were strongly impressed that the downtown area should be developed into a touristic type environment. They gave several recommendations, including the rebuilding of two historic buildings previously demolished, which could be done to encourage and promote tourism in the downtown area of Guthrie. Both the initial surveys and communication with the Guthrie community, city officials, and business owners revealed a substantial desire to incorporate tourism. This factor coupled with the rich architectural aspects of the downtown area and the interesting historic features of the community would be very conducive to a touristic environment.

Through the research and study portions of the project the students were able to gain an appreciation for the value of research. They also learned many historical aspects previously unknown to them about a part of their state's legacy. They were able to learn many things that they had never before understood about the community, its people, and

its heritage. These aspects of the project become very important to the students, the model, and also the recommendations made to the community. The effects of a global learning environment were evident as the students worked together in order to recognize architectural elements through research which would best represent the Guthrie community and the historic downtown business area.

Also as a part of the global learning aspects incorporated by the Guthrie project mathematics and trigonometry skills were highly implemented and became appreciated as students participated in surveying, scaling factors, and model building. For example, while the group was performing the physical survey of the elevations in the downtown area, calculations were required using trigonometry and some algebraic functions in order to ascertain the desired elevational deviation differences. In order to correctly represent the downtown business area, all buildings, streets, and other physical areas were measured and then assigned the 1/8" = 1'-0" scaling factor with scale models built for each building which required higher levels of mathematical thinking. Normally these skills are part of a traditional environment taught in multiple classes. In this project experience, students were able to learn them together as they would naturally pertain to a real architectural project, and thus they became components of the global possibilities of this study. The students were, at the beginning, unaware of the significance of these mathematical functions and gained an appreciation for their uses.

Other hosts of learning possibilities which were aspects of global learning were part of the study. These included enhanced motor skills for drafting, model building, and artistic rendering with critical thinking experiences with many architectural and social problems to solve and design criteria to address, social interactions with the citizens of the

community and news agencies, and political dealings with government officials. This project provided the students with the rich potential to gain knowledge, through awareness and experience, that was global, that was a complete connected experience, not just through a series of traditional courses that may or may not be effectively connected.

Service-Learning Opportunities

One of the ultimate goals of this study was the possibilities provided for the students to provide significant service to the community while at the same time gaining invaluable knowledge in the field of architecture. Guthrie is a relatively small community with a unique architectural composure. The community has a rich historical background which dates back to the development of the west in the mid to late 1800s. The historical context of the city has been somewhat preserved, mostly due to the lack of sufficient interest in modern development projects in Guthrie that ensued nationally during the sixties which hindered the preservation of many of our historical buildings in this country. Recently, over the past ten years or so, some community members and interested participants identified the historical value of the Guthrie community and began to establish a precedence for the preservation of the historical aspects of the community. Currently more than one hundred buildings in Guthrie are registered with the National Historical Society. However, the community itself is still relatively poor and unable to pursue adequate funding for architectural historic continuity. Most of what is being done at this time is on a private basis. The current city government has neither the ability nor the means to hire professional consultation on the possibilities for historic preservation, continuity, and future development for the community. When the researcher approached

the city of Guthrie officials about the possibility of this project, in November 1995, the city

officials in attendance at that meeting were visibly excited by OSU-OKC's offer of the

Service-Learning project. The mayor stated that "It would be an indeed pleasure to work

with OSU-OKC to accomplish this effort. If there is anything more the city can do we

would be happy to oblige." The student project that was accomplished during this study

gave the city of Guthrie, Oklahoma a professionally prepared list of recommendations on

what it might do to enhance, preserve, and further develop the historic business

community (see Appendix E). These recommendations were gratefully received by the

city government officials at a formal presentation on September 17, 1996 at the historic

Carnegie Territorial Museum where the model exhibit had previously been on public

display. The model was on display for about six weeks in order for citizens and public

officials to have the opportunity to view it and to contemplate the written

recommendations which were displayed at the side of the model. The model was housed

in one of the preserved historic rooms on the second floor of the old Carnegie Library,

now a museum. When the model was finished, it was eight feet wide and spanned a length

of twenty feet. The model incorporated about five blocks of the old downtown district in

Guthrie, Oklahoma. At the finish of the presentation, the Mayor of Guthrie read to the

student group Guthrie city Resolution # 96-26, (see Appendix C), which honored OSU-

OKC's efforts in behalf of the city of Guthrie and gratefully accepted the service provided.

The model, which was formally presented, was a visual gift to the city of Guthrie,

Oklahoma that could be used to plan for their future development and enhancement of the

architectural/construction program at OSU-OKC.

The significance of what the proposal meant to the city of Guthrie was not fully

realized by the students until this moment. Many of the students after the presentation had

tears in their eyes. Brad stated that "This has been the greatest education experience of

my life." Don wrote in his final entry of his personal journal that "I am grateful to have

been able to participate in such a noble and interesting course." Jim in his final journal

entry stated:

> Kevin, I would like to take this opportunity to express the gratitude for this
> experience that I have had in working on this project. I have thoroughly enjoyed
> myself and I think the knowledge that I have gained, the experience that I have
> gained, and the service I have given will be beneficial to me in the future, not only
> in business, but mostly in a personal sense of remembrance and delightfulness. I
> will truly miss seeing everyone every day or so. I seem to be at a loss for words so
> I will just say thank you. We truly did make history!

The literature stated that Service-Learning is an educational process that is

directed toward two purposes. The first purpose is to effectively expose students to

learning activities directly related to a subject matter, and the second is to involve them in

making positive contributions to individuals, communities, or institutions (Kinsley, 1994).

This study has substantially illustrated the positive aspects of learning that each of the

involved students were engaged in throughout a progressive educational experience. The

magnitude of the learning possibilities experienced during the project was effectively

ratified at the culmination point when the formal presentation was given to the city of

Guthrie officials and attending citizens. This learning endeavor completely satisfies

Kinsley's first component to Service-Learning. Secondly, according to Kinsley, the

project must make a positive contribution. The contribution given as the result of this

project was a visual gift to the city of Guthrie, Oklahoma to utilize and give architectural

direction to potential enhancements to their historic downtown business district. Judy

stated in her personal journal that:

> One woman asked me while I was taking a survey how much we were being payed
> by the city to do this project. When I told her we were doing it only for our own
> experience and as a service to the city she wouldn't believe me! I assured her that
> it was the truth and she was so nice. She gave me an ice cream cone for free and
> said good luck and God bless!

The ten principles for Service-Learning identified by Delve, Mintz, and Stewart

(1990) were all a part of the Guthrie project. First, the project was one that was

recognized as important by both the students and the city of Guthrie. Second, the project

provided many opportunities for the students to reflect upon what they were doing and

identify the service possibilities to the community. Third, from the beginning the city of

Guthrie and the students knew what the final outcome was to be which was a proposal for

the architectural enhancement of the historic downtown business area. Fourth, the needs

were identified by the values survey which were then acknowledged by the students and

portrayed to the community. Fifth, the responsibilities of both parties, the city of Guthrie

and the OSU-OKC group, were identified at the onset and each party went about realizing

the objectives related to their respective responsibilities. Sixth, the changes that became

apparent during the project were matched accordingly as they evolved by proper

communication between both parties involved. Seventh, there was a strong commitment

from both the sponsoring and receiving organizations. Eighth, the project involved

training, supervision, monitoring, support, recognition, and evaluation. Ninth, the time

commitment in the project was appropriate and had the best interest in mind for both

organizations. Tenth, the project promoted access and removed disincentives and barriers

to participation. The project was a true Service-Learning experience.

The Service-Learning aspects of the project were progressive. As the students became more involved in the service aspects of the project, they also became more committed to it and dedicated to its success. Brad stated that "We must finish this project! It is for the good of the city of Guthrie." After the presentation Ann said "I can't believe how good I feel! I just want to get started on another project like this in another town. When can we start?" The feelings of pride and comfort generated by the Guthrie community to the students affected them and they became more committed to the project. One of the researcher's journal entries stated:

> Somebody says something positive to one of the students and they bring it back and restate it to all of the other students and it seems that they are just rejuvenated toward their goal. The good feelings that they get by the reinforcement that they see everyday on the streets seems to progressively give them more and more strength and commitment to the final goal. We are nearing the end and I now have no doubt that the project will be finished on time, it will be professional, and it certainly will be well accepted by the Guthrie community.

The Guthrie project became for many of the students the most optimal learning opportunity they had ever known. Jim stated in a personal conversation:

> When can you ever have an opportunity to learn so many things that bring out so many qualities and tie together so many loose ends and at the same time say to someone else -- here I am giving this to you for your benefit! I just can't believe it! It's wonderful!

The experience was typical of the study. It provided experiential learning with Service-Learning and made it all a progressive learning affair.

Individual Student Development

Throughout the study each student achieved a measure of growth in both knowledge and appreciation for the profession of architecture and in giving service. Brad

entered the project with a great deal of aspirations and hopes to incorporate many of his desires for architecture toward reality. He had already gained a great appreciation for the profession and had gathered many personal feelings on how architecture should be practiced. His journal was very well kept and thorough. He kept many of his personal feelings about the project, his ideas concerning personal architectural tastes and directions, and positive statements continually regarding the significance and potential of the learning experience. Many statements demonstrated his positive attitude and beliefs in what he wanted to be a very effective architectural presentation. He made comments like the following in his journal: "It is impossible that anyone will fail. Each person has experience and different backgrounds." "We are awesome! Everything is going to be great! It is going to be a big project." By the end of the first few weeks into the project Brad had become a member of a team and considered one of its emerged leaders. Brad gained a great deal of respect from the other group members because of his passion and dedication for the project. Brad grew into a leader, though he knew it not, an example to all of the others. He realized before most the potential impact of the project. Many of his comments early on in his journal reflected that. Some of them stated: "Just keep in mind, we don't want to look back at this and say we could have done better if we had more time. We have a good chance to create something big. I can see that this is going to require a serious effort on everyone's part." "None of us realize how much impact this could have on our lives and the future of education." "This is a new learning experience. Everyone is learning a new role, a new role in an environment consisting of peers. What makes this unusual is everyone is responsible to each other." By the end of the project Brad had gained the respect of the majority of the students. Often he had spent even the

weekends sleeping in a sleeping bag at our flat and visiting the sites, gathering historical

information, and gaining an appreciation for Guthrie. In one of his final journal entries he

wrote: "I feel that we have accomplished something great. We can look back on what we

have done and be proud. This was one of my personal objectives, and we succeeded."

Some of the other student's comments concerning Brad at the end of the project

reinforced the researcher's personal observations. Jeff, who did not at the beginning have

a good report with Brad stated in his journal: "He really surprised me in his attitude

toward this project. He worked hard and really out worked all of us." Judy said of him in

her journal: "I always knew he had it in him. All he needed was for the macho guys to

stop teasing and take him seriously. He became our leader and never even knew it." Don

wrote the following about Brad in his journal: "What I learned from him was focus and

knowledge. This is a person who will do great things in the field of architecture. He

showed me how to use a scale and to draw the buildings properly. It is one thing to have

talent but it is another to be able to share that talent and help others. Brad does both."

Jeff had a lot of potential to assume many of the leadership responsibilities, either

shared or singular, as did Brad. Jeff chose to not get too emotionally involved in the

project, as a result Jeff did not have the growing experience that Brad did. Jeff always

seemed too preoccupied in other things regardless of his talent and potential. He was

regular in his attendance, but failed to emerse himself into the possibilities. Even though

Jeff was able to grow from the experience, his growth was limited. His attitudes were not

very well received by most of the other students either. Those who knew him well and

understood his potential were disgusted and seemed to avoid him most of the time. Those

who did not know him well just referred to him as a slacker and not an ambitious

participant in the project. An example of this was reflected in the researcher's personal

journal.

> While we were moving our equipment into the third floor of the Guthrie building
> Jim asked me where Jeff and Stan were. I really didn't have any idea. They had
> left earlier than the rest of us and I assumed that they would beat us there. About
> halfway into moving all of our equipment into the building they showed up,
> drinking sodas, laughing, and having a good time while the rest of us were wiping
> the sweat off of our faces.

The apparent apathy that Jeff emitted during the project was evident to the other students

also and they were concerned that it would affect the outcome of the project. He knew

that he had knowledge and talent but for some reason did not exert it. Ann said in one of

her journal entries; "When he worked, he worked, but his heart was never in it. I don't

understand his attitude on occasions." Don, who did not know Jeff previously, said this of

him in a journal entry: "Watching Jeff do CAD caught my interest. He was good in design

and when I asked questions he was willing to show me which makes a difference but he is

a hard person to get to know." Brad stated in a journal entry:

> Jeff is the only person of this group to cause me any grief. It is his short attitude
> that is not conducive to success in a group exercise. Jeff is also condescending
> and indifferent. This only leads to stress, which is not something we need to
> manufacture because with this project it came natural.

The researcher wrote the following in his personal journal:

> I like Jeff. He has been a leader in all of the other classes that I have had him in.
> He has been the president of the Architecture Club and did a great job. I don't
> understand his attitude this summer. I had planned on him taking one of the lead
> roles in this project. I realize that he will be going on to Stillwater next semester,
> maybe he is just biding time. Judy and Ann said that he just wants the credits so
> that he can graduate. This just does not seem like him.

As an end result, even though Jeff learned from the experience, there was little gained.

His heart just was not in it. His non-committed and apathetic attitude toward the project

might be reflected in one of his own final journal entries after he found out that the journals were required as part of the final grade, he said; "I lost my notebook for a while but then I found it Monday night." His journal was three pages long.

Stan did not have a lot of time to dedicate to the project. He had a full time job working at Wall-Mart and needed to continue in order to be able to go to school. His attendance was far more sparse than the others. As a result Stan was not able to experience the same things that the others were able to grasp. When he was there, Stan was very dedicated and helpful. The lack of time commitment to the project was what hindered Stan from having a great learning experience. Stan coming into the project had a sincere desire to participate and learn. Throughout the duration of the project, on those occasions when he could attend, he was able to participate with the true spirit of service and the attitude to learn. The learning outcome for Stan was far greater than would be expected because of his positive attitude toward the project and learning in general. As a result Stan was able to grow as much as could have been expected. He stated; "I never realized that just coming here and putting together this proposal could be so big! I can now understand many things I didn't before about the whole picture. This has really been great!" Jeff identified this in one of his journal entries and said; "He worked hard even though he missed some classes. He did some fine work on the buildings and has a lot of talent." Don, who was new to architecture but understood people well, said; "Stan knew a lot and helped me to learn easier ways to build the model. He was always willing to help and not criticize when I made mistakes which was often." Judy said: "Stan was only able to be here half as much. But he really had to work and I understand that. When he was here he worked twice as hard." The researcher stated in his journal:

I feel badly for Stan. I know that he really does want to be here and participate as much as he can. He just simply needs to work in order to accomplish his educational goals. When he is here he is a great contributor to the project. He has had a lot of architectural classes under his belt and can assist the less experienced students with their inabilities. It is just too bad he couldn't be here more.

Judy was the grandma. The researcher had Judy in several courses before the Guthrie project and had found her to be sincere in her desires and intents toward architecture and education. However, she was troubled with so many problems stemming from home that it was difficult for her to keep a consistent and dedicated time commitment to the project. For example Judy's first journal entry stated, "Missed entire week due to having to go to court." Jeff stated in his journal, "Judy worked hard when she was here. But she missed a few too many times." When she was there however, she was very active in the progress and evolution of the project for presentation. Judy was able to gain from the project as much as possible because she worked at it so hard when she was there and possessed a very positive attitude from the beginning. One example of her desire to learn and contribute was when she took on the responsibility for the redevelopment of the old Bath House which had been torn down many years previous. The group had decided that the bath House was something that would need to be rebuilt to coincide with the historic architectural theme and values expressed during the survey. Judy became responsible for gathering all of the information on the Bath House and building the model to represent its rebirth into the downtown area. Judy built a model replica to begin with, but it was difficult to do for the lack of physical information, she had to rely upon only old pictures. The first replica was not one which was readily accepted by the rest of the group. She agreed and from her journal entry she stated:

Well I started over today almost from scratch. The only thing I kept was the base, I worked entirely too hard on the base. The front steps and landing were almost too much but they came out good so I kept them. When I said I was going to rebuild it Brad just about had a fit. He just kept telling me we didn't have the time and don't sweat the small things he said. So instead of going to lunch I stayed and rebuilt the entire building. Now it looks like an architecture student built it not like it was done by a ten-year old. I want to do things that I will be proud of, something to put in my portfolio. I think that this project is important enough so that it should be in my portfolio, important enough that it shows what I am capable of, even at this point in my training, in a working environment, dead lines, clients, and all. I started at 9:30 this morning and by the time they came back from lunch about 1:30 I had everything rebuilt and on the base . . . I think I'll be proud of it. I'm going to get pictures of it before it is down and then after for my own. Had to gloat a little. Brad said we didn't have time. Thought I couldn't do it. HA! And it looks good even if I say so myself!

As a result of this experience and others similar, Judy became one of the students who gained the most from the experience. She seemed to grow as the project developed, learning and absorbing all aspects in context, and by its finish was as dedicated to it as any other student. Don said of her in his journal, "Judy is very artistic and has a great commitment to the project and a big interest in the Bath House that impressed me a lot. One of the main things I learned from Judy was how to shade the brick areas on buildings and windows for detail. That was a great help." Judy, although she was not able to participate as much as some of the others, was able to gain more than some who were there more because of her positive attitude and commitment to learn and to the success of the project.

Ann entered the project as a recent graduate of the architecture program looking for expanded experience and additional materials for her portfolio. From the beginning Ann had the most positive attitude about the project which seemed to positively effect the other students attitudes also. Brad stated in his journal that "Ann was the most pleasant person he has ever worked with." Her commitment to the project was infectious, even

though she thought that she wasn't doing enough. In a personal interview she stated; "I

know that I am not doing as much as I would like to. I just feel drained of energy. Maybe

it's the heat that is getting to me." The researcher, however, in his journal wrote: "I don't

know why Ann thinks she is not doing very much. It is obvious to me that she is doing far

more work and effort toward the project than most of the other students." Jeff stated in

his journal that, "Ann worked hard and was here all of the time." Judy stated, "Ann

always works hard and she took crappy jobs that no one else wanted to do and never

complained." Don registered the following entry in his journal concerning Ann: "She

always took the time and showed sympathy toward my ignorance. She has a good talent

for architecture and she will go far. She is so very kind and helped me a lot." She became

intensely involved and committed to the project. Because of the commitment and

positiveness, she became one of the leaders that contributed to the project's success. She

indicated that "the project experience had changed my life and enhanced my dreams of

architecture." The researcher stated in his journal:

> Ann was the leader of students to bring them in tune with what service learning is
> all about. Her kind and gentle attitude, always respecting others, was evident in
> not only her dealings with fellow students but also with the community of Guthrie.
> She gained the respect of all those with whom she associated. I think that it was
> through her that the others gained a true appreciation of the service we were
> providing to the city of Guthrie. Ann grew more caring everyday while visiting
> with the Guthrie community, doing historical research, and collaborating on the
> enhancements that we were proposing. By the end of the project, we were all just
> a little prouder and held our head a little higher for the service we provided. Much
> of this should be attributed to Ann.

Bill was never really involved in the project seriously because of a host of other

responsibilities he was involved in. He worked part time for his stepfather, he was also a

part-time security guard, he was attending school to become a policeman, he was also

taking other traditional classes on OSU-OKC's campus, he had a serious girlfriend, and he was also trying to do the Guthrie project at the same time. He was, in comparison to the others, hardly there. Therefore, he never came close to the potential that the experience could have provided and grew little if at all during the time. The researcher stated in a journal entry:

> Bill is never here! I don't know how he can gain anything from this project if he can never truly experience it. This whole thing, the philosophy, is based upon experience and Bill is unable to do that. In my opinion a student cannot grasp the meaning of what we are doing when he is in attendance once a week at the most. I don't think that Bill will gain anything from this project.

Judy at the end of the semester was summing her perceptions of all the students and when she got to Bill she stated, "Where was he? Did he drop or what?!" Jeff said in his journal; "He was hardly here!" Don didn't even know that Bill was in the class, he hadn't seen him enough to realize his participation, he stated; "That guy! I never knew he was in the class!"

Jim was a man in his mid forties who had been involved in many aspects of construction for more than twenty years. He was at the time a construction superintendent for a large construction company. He was dedicated to the project and its success. He became involved in every aspect of it that he could in order to as he put it to "experience as much as possible." Jim had a passion for learning and was highly involved. His commitment was undaunted. He became another of the obvious leaders and was instrumental, based upon his past experience, to the project's success. For example, at the beginning of the project the students were unsure on how to create the base for the model. They had decided the scale factor to be 1/8" = 1'-0" in order to be large enough to see some detail but not too large to be unmanageable. As they planned the method of putting

the model onto a sturdy base at the predetermined scale, they realized that a surface of approximately eight feet wide by twenty feet long would be necessary for all desired parts of the downtown area to be incorporated. This created a dilemma; the area was so large how could it be built on a single base? Jim who relied upon his construction background suggested that five sheets of plywood could be used to create the base and that the model should be built in sections for ease in handling and moving. The rest of the group agreed, and Jim took on the responsibility of building the five separate bases to receive the model. Through his leadership, which was not overpowering but merely suggestive, he was influential in many ways in the success of diverse aspects of the project. It was Jim who took on the initiative to go out and measure all of the building parameters. He asked for any volunteers to help him and promptly Stan and Don agreed to go with him. They created the survey crew for the duration of the project and played a big part in gathering all of the physical information. Jim used his skills and knowledge to benefit the combined effort of the project at hand. The researcher stated in his journal:

> It really is nice to have someone like Jim to be a participant in this group. Although the other students have more architectural experience and can draw better or know how to build models better, Jim contributes to the project in other ways that are as important. His construction background and understanding of, what is drawn then needs to be interpreted in order to be built, is essential for the other students to understand. It is really interesting to have such a combination of individuals participating with a good variety and depth of background.

Don, who worked very closely with Jim through most of the project said this about him in his own journal:

> I think that Jim should get an A+ grade for his work on this project. I learned from Jim a lot as we surveyed and got measurements. He showed me the proper way to read floor plans using a scale and helped me to transfer the measurements to the drawings. I learned the most from him. Jim was a great asset to this class. I will never forget his diligence.

Judy stated, "Without Jim we would have never been able to do the model. He and Don worked very hard to get all of the measurements." Jeff said; "Jim was always willing to do what ever was necessary and needed to be done. He was always here for us." Jim in several personal conversations with the researcher and interviews stated how much he enjoyed working on the project and how much he loved to learn. He particularly enjoyed the style of learning using experiences during the Guthrie project. In one interview in particular Jim said "I can't believe how much I have learned in this summer. Who would have ever thought that one could learn so much!" Coming into the project Jim believed that he could be a teacher of many of the construction side issues to the project, and he did. But, he also realized, by the end of the project, how much knowledge he lacked and what the global aspects of such a project entailed. He became a model student for how a learning project, such as this one, could benefit those who truly applied themselves.

Don was a new student, not to mention a new student to architecture. This was Don's very first experience with higher education. He was a 35-year-old injured maintenance worker who was coming back to school to be retrained. He chose architectural studies to pursue. Don at the beginning, having no previous experience in architecture, was overwhelmed, but he caught the team spirit and quickly fit into his own role of the development of the project. By its finish it was very apparent that Don had grown substantially. He was a dedicated student and hardly ever missed a session. He often stated that; "I'm here to learn," and learn he did. It would be very difficult to assess totally the amount that Don was able to learn being a complete novice during the summer project. It is interesting to note, however, that during the next fall semester as he was

enrolled in the first traditional architecture courses, Don was asked to bypass these first

courses by his instructors and enroll into advanced courses because he exhibited an

advanced understanding of architectural concepts. This advanced understanding was no

doubt gained the previous summer in the Guthrie experience. Jeff in his journal said this

of Don; "He has worked very hard on our project and has improved very much in his

understanding of architecture." He did work hard. He was intently concentrated upon

learning as much as he could during the summer. The researcher in his journal stated:

> Don is like a sponge. He absorbs everything he can and what can be learned.
> While we were surveying, he was just full of questions of whys and what for's
> about the survey and the reasons behind it. He is always asking questions of the
> other students about model building, drawing, scale factors, design, etc., and they
> are always very considerate to oblige his curiosity. The collaborative aspects of
> this project are amazing, students helping other students, and together they reach
> for the same goal. Don is learning but is also a great contributor. He is always
> here, doing whatever he can to help, and has a great desire to learn.

Each student learned, gained, and improved differently, some more than others,

but they all gained from the project experience in one way or another. Those who chose

to learn and grow were able to gain the most from the project's offerings. The researcher

wrote in one of his last journal entries:

> I have come to believe that no matter what the learning situation is or the
> methodology in treatment that students will only learn as much as they want to.
> Even though I also believe that this project provided a great amount of possibilities
> for students to learn, more than could ever be available in a traditional setting, the
> students who were genuinely interested, had a positive attitude, and exerted
> themselves gained the most from the experience. Attitude is of great important in
> any kind of learning situation. I do however believe that the incentives and
> motivation for learning in this project were enhanced because of the real aspects of
> the project and the service learning capabilities. These elements had a great effect
> upon the students ongoing and increasing desires to learn more.

Results Relative to Objective 2

Objective #2

To identify what problems might be encountered in the use of progressive principles for learning incorporating experiential/awareness ideals and service learning for community college students.

Geographical Distance Barriers

One of the problems associated with the study was a physical issue. The project location was approximately twenty-five minutes driving time away from campus. Some of the students had problems commuting. The commute seemed to be awkward for students who had to travel up to forty minutes each way in order to attend. Ann indicated, during a video taped focus group interview, that "The commute was difficult but not impossible." Jim stated in a video taped personal interview that "the commute was a little much, having to travel twenty-five miles each way from Oklahoma City to go to class."

Also, the possibility of not being able to attend because of the physical distance could have deterred other students from participating. Some students may not have had the means of transportation to get to the site every day and, therefore, were not able to participate. Judy stated in a personal videotaped interview that "If Ann wasn't able to pick me up every day, I would not be able to come. I just don't have a car or the means to get here." This was a limiting factor for the learning opportunity. In the researcher's personal journal an entry stated that:

Several students contacted me who expressed a desire to participate in the Guthrie Experience. They told me that they just did not have the transportation means to get to Guthrie and back every day. I said that we could probably arrange a car pooling possibility for them. They left unsure that they would be able to participate.

Non-traditional students, who often juggle school, a job, and a family have difficulty finding the resources to do projects out of the normal routine of traditional schooling. This seemed to be the case for this project also. Transportation was a strong issue.

Time Commitments

Another problem associated with the project was the time commitment necessary for the students and the lack of flexibility in the schedule. Students who participated on the project had to dedicate a good portion of time in its behalf because the class was held from 8:30 a.m. to 5:00 p.m. Monday through Thursday with some students working on Friday and Saturday. There was a good deal of sacrifice on the part of the students toward their jobs and other work related opportunities in order for them to effectively participate. Judy was a single mother whose teenage daughter had two children also living with her. She was constantly distracted from the project because of domestic problems. At one point during the project, she had to deal with being evicted from her rented home. This issue took a lot of time in which she had to move out of the first home, clean it to get her cleaning deposit returned, search for a new home for rent, and then move into the next one. All of this was done while participating in the Guthrie project with no mode of transportation and a husband in jail. Three of the students had children at home and were responsible for making babysitting arrangements. The commute was a financial strain also

as students were responsible for the cost of transportation, food while in Guthrie, babysitting as stated, and other related costs. These situations are similar to many problems associated with the non-traditional student. Judy wrote in her first entry to her journal; "Missed entire first week due to having to go to court." In the researcher's personal journal, it was stated that "Stan and Bill have work related responsibilities and cannot participate as much as they would like to." In a video taped personal interview, Jim stated that "It was very hard to work and do this project at the same time." He said, "I would much rather just do this project because I like it so much, but I have a family to think of also." Jim, in a journal entry simply stated, "I wasn't able to be at the project today because of work." Students' journals were often splattered with similar related comments.

<u>Fatigue Factors</u>

Another problem that arose, but wasn't understood at the time, was a definite lull time about midway into the project. During this time the activity and excitement level reached a low point. Midway to the completion date, there seemed to emerge a level of fatigue among the students. As the project due date grew nearer, the group began to feel the pressures of its significance. People began to feel fatigue and expressed tiredness. The task that had been taken on and the given time constraints were significant and very taxing. The excitement level and participation dwindled considerably during this phase of the project. One day, for various reasons, only a few participants came to work on the project. The atmosphere was at an all time low. The students, feeling the time pressures, began to more freely ask the researcher (participant observer) what to do and how to do

things instead of relying upon awareness and experiential concepts in a team atmosphere

like they had done up to that point. A journal entry by the researcher explained this time

of frustration:

> We have been involved in this project for 4 ½ weeks now and the pressure,
> accommodations, and time commitments are beginning to take their toll. Some of
> the participants are getting tired and somewhat discouraged as the project
> escalates in order to meet our commitments to the city of Guthrie. I am finding
> myself losing patience with some of the students. I, too, am feeling very strongly
> the pressures of finishing on time plus additional strain because I am the person
> who arranged the project and made the commitments to Guthrie City. It is my
> reputation on the line as well the image of OSU-OKC architecture department and
> the institution in general. It seems to me that some of the students lack the
> dedication and professional maturity to comprehend the significance of completing
> and doing well on this project . . . I'm tired. We have completed about 75% of our
> proposal to this point and have just about three weeks to finish . . . I am
> becoming, even though I consider myself still a participant observer, the authority
> on how to do our project. I suppose that this is natural because I am and have
> been their teacher, and I have been involved in the field of architecture for twenty-
> five years. It seems that whenever someone has a question or needs an opinion on
> something; they always ask me and not their fellow students. I believe that they
> just ask me and do not try to figure it out among themselves because it is easier
> and they realize that we are running out of time. I guess this is OK, although I
> would like to see what would be different if they were to solicit the advice and
> opinions of their fellow students. Often I ask them to inquire of another student or
> to resource other information in order to get other input and not always depend on
> just mine.

Because of the concern that the researcher had about this low time, a time of

definite lull in the student activity and excitement, he called another focus group session to

discuss the issue. During this focus group discussion the group discussed the reasons for

the decline in positive attitudes. Ann mentioned, on video tape during the focus group

discussion that it seemed that Jeff and Stan were taking this course for the purpose of

gaining additional college credit toward graduation and indicated that they did not seem

committed to the value of the project because of their lack of maturity. Brad indicated,

also from the same video tape of the focus group discussion, that Jeff had much to offer

the project but lacked commitment. Judy said that personal issues with other students, family, work, and social life, which had been mostly neglected for the past portion of the project, now needed to be attended to by some of the students. As the discussion continued on video tape, they talked about what was needed to truly become re-committed and excited about learning. Brad said that "praise and positive feedback were needed to become excited about a learning project." They all agreed that an intense interest in or strong need causes one to seek learning. The group talked about the project, and they were asked about their reasons for commitment. The primary motivator for Ann was an intense desire to complete this project. Ann had already graduated and was taking the project simply to learn more and become more effective and competent in the field of architecture and to gain more hands on experience. Ann indicated that the project was doing exactly that. Brad said that this experience was bringing the global aspect of the architecture profession into reality. Brad stated that this allowed the whole picture of architecture to be seen at once. This was the primary motivator for Brad. From the journal of the researcher, the following was written about the focus group discussion on commitment:

> What I had foreseen and was afraid of happening finally occurred. I had noticed a steady decline in both excitement and commitment to the project over the last two weeks. We discussed the notion of commitment and tried to analyze the difference in what each student felt toward the project as compared to the other participants. Brad, Ann, and Jim seem very dedicated to the project as does. Ann mentioned that she knew that Jeff and Stan were taking the project only for the purpose of gaining additional college credits toward graduation, and they were not committed to the project as much because of their lack of maturity. Brad indicated that he thought that Jeff had a lot to offer the project and had a lot of talent but lacked the commitment. We discussed what it takes to become truly excited about learning. Brad said that praise and positive feedback are necessary to become excited about a project. I asked what it takes to inspire a person to go out and learn something on their own? They both agreed that it takes an intense

interest and/or a strong reason to do so. I tried to relate the conversation back to our own project and asked them if that was why they were both so committed to this project? Judy stated that she does have an intense desire to be a part of this project. She has already graduated and seeks this experience in order to add to her portfolio and gain invaluable experience on a project such as this. Brad stated that this experience brought together all of the aspects of architecture that you gain in typical classes. He indicated that this experience allowed him to see the whole picture and understand the global aspects of the profession.

This period of time lasted for about a week in which an attitude of fatigue and preoccupation were dominate. But that was all. After that a renewed commitment seemed to arise and dedication to the project's finish was regenerated. There was no other period of time during the study where commitment seemed to be lacking. It could be the result of the coincidence of many different factors happening at the same time. It was also around the 4th of July. The holiday time period and the summer heat could also have been factors.

At first the Guthrie project was exciting, a new adventure, and opportunity for learning. When the reality and significance of the project eventually "sunk in" the students responded in different ways. This all happened also around the 4th of July holiday where their interests became naturally distracted for a short while. The younger students, who lacked maturity, dealt with the fatigue by diverting their efforts toward amusement activities and "having fun." Other students who had greater responsibilities and family situations became somewhat overwhelmed and concerned, this generated attitudes less concerned with the Guthrie project and more toward their family responsibilities. The work involved in the Guthrie project was difficult and required considerable time efforts, cognitive involvement, and physical activities. The project itself was demanding and the

students began at that time to understand its toll. After the 4th of July holiday however, everything seemed to get back on track. The researcher wrote:

> It seems that after the holiday the students are again committed to the project. Maybe they needed just a little break in order to refocus upon the completion of our project. All of the students are here today and are working again almost like at the beginning. Maybe it is that they can now see the end in sight and have gained their second breath. It is nice to see them working hard again.

Assessment Dilemma

The issue of equitable assessment was a problem and concern. It was difficult to address any traditional concept of assessment or measurement value to each of the student participants in order to give a fair grade analysis. This concern faded, however, as the study proceeded. The students addressed the assessment issue themselves. In their daily journals they were asked to evaluate themselves and their peers on a daily basis. As described earlier, the method of assessment became a progressive transition during the project. The students were alerted about the problem of proper assessment early in the project and asked to reflect upon what they thought would be a proper method for the evaluation of this class. As the first few weeks passed, the students engaged in several discussions, and combined these with their own personal observations and decided that at the end of the project each student should elaborate what grade they think that each of the other students should get in their personal journals. This student input then would be incorporated with the teacher's evaluation over the summer to assess the final grade for each student. This proved to be an effective tool for assessment at the end of the project when a grade value was required for each student. The results were very good as each student was responsible and contributed to this process. At first it was unknown as to

what might be a fair method of assessment for the students. This was not a traditional classroom environment with standard assessment/ measurement instruments being administered intermittently throughout. This project required almost entirely subjective evaluation from both the students' part as well as the instructor's. The researcher wrote the following:

> As I am about to assess the final grades for each of the students, it becomes an interesting experience. I assured each of the students that their journal entries were strictly confidential, and I would be the only person who would see their grade evaluations of each other. Still some were very sympathetic toward the others indicating that all should get an 'A.' Ann said that she thought everyone did well and should get A's. Others were more critical. There were some who took it very seriously and tried to evaluate according to what they thought was fair. Brad said that Ann, Jim, and himself should get A's, Judy, Jeff, Don, and Stan should get B's, and Bill should get a C. Judy said that Ann, Brad, Don, and Jim should get A's, Jeff and Stan should get a B, and Bill should get a C. Jeff said that Ann, Jim, Don, Brad, and himself should get A's, Judy and Stan should get Bs, and Bill should get a C. It is difficult for me to give considerations to the extreme suggestions however the suggestions given by Brad, Jeff, and Judy seem more reasonable. My observations during the summer seem to follow more closely their recommendations. I think that this evaluation process worked out well especially since all of the students knew that their efforts would be evaluated in this manner. Sometime the students can be the best judges of themselves. In this case I think that it is true.

Another factor or problem associated with the assessment of the project and similar projects was the grade accountability which would be necessary for an accredited institution of higher education. The process of evaluation and assessment which evolved and was incorporated in this study would not be acceptable as required for grade auditing purposes for the university. There were no standards or pre-developed objectives and assignments and tests scores that could systematically produce a logical grade value for each student. The grades assessed were evaluated from subjective analysis of the students and the instructor based upon perceived dedication and commitment to the project. This

method of evaluation produces a problem for accredited degree granting institutions.

How can subjective peer, employer, and instructor evaluations be fairly measured?

Results Relative to Objective 3

Objective #3

To identify what political issues that might be raised as they relate to traditional

education, community involvement, and student success with the application of

progressive education based upon experiential/awareness ideals and service learning.

Cooperative Learning Opportunity

The cooperative opportunity that OSU-OKC had during the study, with the City of

Guthrie Oklahoma produced several positive political reprocusions. Because OSU-OKC,

a learning institution, was in Guthrie, it provided an opportunity to teach CAD

applications to several of the city engineering staff. CAD systems had been moved to

Guthrie for the project and arrangements were made for instruction in CAD applications

utilizing the available systems. The city of Guthrie had desired initial training since they

had invested in CAD applications nearly a year previous to this point and had not received

any prior training. OSU-OKC was able to provide the needed training to the Guthrie city

officials while the project was in progress. For the last three weeks of work on the project

in Guthrie, the afternoons from 1:00 p.m. to 4:30 p.m. were set apart to do the training for

the Guthrie City Engineering personnel. OSU-OKC provided another instructor from

their Engineering division to come to Guthrie and provide the training. The city of

Guthrie had also invested in a CAD drawing library prepared by a consulting agency

depicting topographically the entire city limits. The students were able to use some of the

applicable CAD files for the development of their proposal. The cooperative aspects of

the study were found to be very positive. The following was entered into the researcher's

journal:

> Today I spoke to the Guthrie City Planner. He had wanted to talk to me earlier.
> He wanted me to put out a press release to the residents of Guthrie so that they
> would be appraised of why we were there and what we were doing. He also
> wanted to know if OSU-OKC could train some of his staff while we were here on
> CAD applications. I am currently exploring how we might do this, possibly
> utilizing the CAD equipment that we moved to Guthrie. This was an aspect of the
> project that was not anticipated at all, an opportunity to assist and serve the
> Guthrie community in other ways that were not even anticipated.
> This was one additional experience where the students realized what it could mean

to learn and at the same time provide a service to society. The city of Guthrie Oklahoma

was sincerely grateful for the service rendered during this project. The city of Guthrie

engineering department could then use the skills they had learned to effectively utilize the

technology that they had purchased. This would be a tremendous asset to the future

development of the engineering aspects of the city government. The Guthrie city Planner

stated:

> We have had the software and CAD hardware for more than a year now and none
> of us have been able to learn how to use it. We have hired consultants to do
> various tasks that would aid our progress in city planning associated with CAD,
> but we could not access it. The opportunity that we now have to gain this training
> will be a significant boost for our department in utilizing the technical tools at our
> fingertips. This is a great step toward the future planning of Guthrie.

Bureaucratic Institutional Politics

The time elements of this progressive architectural project experience, instituted politically by a bureaucratic organization of higher education, contributed several negative aspects to its potential. The fact that this project, which was deemed an OSU-OKC course for credit, was scheduled during a regular summer semester period, put limits on the study. The progressive project was limited to an eight week traditional summer semester time allocation for completion, and grades were then due to the registrar's office at the pre-established time in order for the course to be legitimate according to traditional standards. This time element also affected how the commitment given to the city of Guthrie for completion of the project. The project was committed to be completed at the same time that the OSU-OKC summer semester ended. It was hoped that the students would be able to, by experience and awareness, gain every opportunity to learn. However, the time commitments that were made in order to finish the traditional summer semester could infringe upon these learning opportunities. Also, it was important for the students to struggle and grow and engage in problem solving and progress in learning as they gained awareness together, but the constraints of completing a the project on time according to traditional education standards and during a college summer semester system was an issue that could not be changed or altered. As a result of these problematic situations, the researcher had to become a guide for the students more than he desired while still trying not to disturb their own awareness capabilities for learning. When there were disagreements or issues that became cumbersome or curtailed the learning process, the researcher would mediate, making subtle suggestions or recommendations to the

outcomes of their collective decisions. If the researcher had not interceded in this way, the project would probably not have been completed given the time constraints. This situation or environment was not desirable given the focus of the study but under the circumstances was acceptable. In an early journal entry the researcher had written:

> I find it somewhat frustrating as the instructor of the course, and knowing the expectations of the city of Guthrie, that the students will have sufficient time to fully take charge visualize the process of the project. Part of me wants to let them struggle and learn as they grow together. Another part of me realizes the significance of completing a quality proposal on time in accordance with the summer semester system. I think that one thing I have learned in doing this project is how to guide the process along more smoothly without interfering with the progressive learning concepts of self actualization. When students are in disagreement as to what part of the process should be or need procedural policies defined, I will step in and mediate and make suggestions as to what might lead to desirable outcomes. If I don't do this, the project could take far too much time to complete given the current time constraints. As it is, we have resolved ourselves to the fact that we are only going to be able to finish the model only, and not all of the other drawings we had originally proposed. Time in this type of learning environment must not be constrained in order to be completely effective."
>
> Jim wrote in some of his journal entries:
>
> We finished and moved the 3rd 4' x 8' model. Everyone seems to be intensely working on the 4th model today. It seems that the pressure of the deadline is affecting everyone's working habits.

And again a little later he wrote, "We basically finished our 4th model section and started our 5th and last section. The deadline dilemma seems to keep everyone working hard and fast."

Judy indicated in several of her journal entries that she, "just wished that we had more time!" In a personal interview, on video tape, Judy stated that: "There wasn't enough time to do the kind of job on this project that I would like to do. We really needed to do all of the research before, maybe in a previous semester, then we could have spent all of our time just on the proposal."

Ann also indicated in a personal interview which was video taped that she "felt badly that we didn't have more time." In a focus group discussion about midway through the project, many students brought up similar expressions of concern. Judy and Ann reiterated their concerns for what they deemed as the "lack of time to do a good presentation project." Brad stated that he to "wished that we had more time but I also think that the project was going well and that we should be proud of what we are doing."

Ideally this project would have been one where there were no real time constraints. Architecture is a profession that deals highly with deadlines and time commitments. However, for the most effective environment for learning, utilizing progressive concepts, students will need time to solve problems, gain awareness, and reflect upon their newly acquired knowledge in order to search for additional knowledge and experiences and to progressively grow. The time constraints on this project hindered the effectiveness of the learning potential but did not stifle its success.

Political Struggles Against the Traditional Model

Another negative aspect of the study related to the political nature of institutions of higher education that are unable to break from the traditional mold. The researcher in this study was also a full-time faculty member of OSU-OKC. The pressing issues that effect a bureaucratic institution could not be avoided and required attention despite the project commitments away from campus. The project required the researcher to be away from his office almost entirely during this summer semester to facilitate the learning project and help prepare the professional presentation. Even though the institution gave their total support to this project, it was difficult for the researcher to not be on campus

enough to take care of various issues that would normally be a part of the day to day life

of an administrator or professor in a traditional institution of higher education. There

were still all of the aspects of educational administration that needed to be attended to in

order to begin the fall semester, and these had to be somewhat neglected because of the

researcher's commitment to this project.

During the project the researcher, along with several other educational peers at the

university, were asked to travel to another city in order to visit a college that had

incorporated a technology center concept for learning. This situation required the

researcher to be away from the project and the students for three active days during the

height of the project. Another example is when the researcher was responsible for the

development of a training agreement with Lucent Technologies. This agreement had a

time line associated, and the researcher was required to devote many hours on several

different days to the development of this proposal. Another example was the development

of course offerings for the upcoming semesters which required the researcher's

involvement and presence on campus during this development time. These and many

similar circumstances related to a traditional bureaucratic educational organization took

the researcher's time away from the Guthrie project and students and were detrimental

toward the implications of the research study.

The Guthrie Oklahoma Experience, or the architectural project for the city of

Guthrie, was something far different than what had ever been tried as a learning method

for Oklahoma State University-Oklahoma City. The project required the students to be

removed from the campus environment a substantial thirty miles. It was not set up as a

structured course with set meeting time requirements and objectives. It was instead a

situation where students could come and go as they needed. Most students spent forty hours or more a week in the project. There were no standard tests administered during the semester, but the reality of accomplishment was the final goal and the model presentation to the city of Guthrie.

It was difficult to have this course, or better, this learning project in existence under the control of a bureaucratic institution of higher education. It was like it didn't belong and did not fit. The fundamental rudimentary activities associated with OSU-OKC still needed to be done and this deterred from the researcher's desires to carry on with the Guthrie project. Even though there were wonderful learning possibilities occurring in Guthrie, school went on as normal in Oklahoma City.

The saving factor to the success of the Guthrie project was the researcher's commitment to the value of the project and the potential of the study. The circumstances could have been better had there been a more liberal administrative structural environment, however, given the circumstances the project was considered by the researcher and students alike a huge success. As Jim stated, "We truly did make history!"

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS,

AND RECOMMENDATIONS

Summary of the Study

This research study was based upon an educational experience. Architectural

students from Oklahoma State University-Oklahoma City, a community college, prepared

an architectural proposal as a service to the city of Guthrie Oklahoma by providing

possible architectural enhancements for the future development of its historic down town

area. This project took place during an eight-week period over the summer semester of

1996. The research purpose of the study was to observe the students, in a qualitative case

study setting, as they undertook an actual architectural proposal using progressive,

experiential, and awareness learning concepts in a service learning project. Over the

course of the eight weeks, the students were able to define the proposal, develop the

necessary components of the proposal, and complete the related architectural model,

drawings, and written documents for the final presentation. In September 1996 the

students completed the task by giving a formal presentation of their recommendations to

city officials and citizens of Guthrie Oklahoma.

Conclusions

<u>Overview</u>

Bringle and Hatcher (1996) cited Ernest Boyer who indicated that higher education needs to reconsider its mission to be that of educating students for life as responsible citizens. Gregson (1995, p. 10) stated that "To contribute to democracy, rather than hinder it, (educators) need to employ a pedagogy that is both concrete and transformative." This study illustrates such a learning project where students gained concrete/transformative experiences that would direct them toward becoming better prepared members of society.

The most significant realizations of this study were that the participant students obtained the purest forms of progressive understanding through learning techniques focused on awareness and experience. The learning environment during the Guthrie project was created specifically to be conducive to progressive principles. There was no set curriculum for the students to follow. The objectives of the course were discovered by the students themselves.

This study indicated that the principles learned by the students could not have been replicated through traditional methods in a classroom. The students gained a more complete understanding of architectural applications as they grasped the whole perspective, the full spectrum of what was necessary to accomplish the architectural task at hand in order to complete the presentation. The learning experience was global, real, and created a natural excitement for the students; learning had meaning.

Service-Learning, according to the literature, has two distinct objectives, to provide students with an effective learning opportunity and at the same time provide meaningful service to an individual, group, organization, or society. The positive effects of this service opportunity were substantial. Guthrie city government officials were pleased with the recommendations. The resolution given to the OSU-OKC architectural group by the City of Guthrie (1996) (see Appendix C) stated:

> The City of Guthrie officially thanks Mr. Kevin Burr and Dr. Jerrilee Mosier upon promoting a good working relationship with the City of Guthrie and their efforts and contribution to the historic district located within the City of Guthrie, Oklahoma, and all of the students who participated in the research and completion of the project.

Guthrie community members were impressed by the implications of the proposal and the service rendered. Student participants were forever touched by the obvious positive response from the community about what they were able to do for them.

Any negative aspects of this study were facilitative and were far outweighed by the positive learning aspects. Facilitative aspects are variables that could be controlled through greater cooperation, planning, and understanding. With better planning there could have been arrangements made for the Guthrie project to become less constrained by time commitments. Perhaps an independent study arrangement for the students coupled with a sabbatical situation for the instructor in this project would have lead to a more effective incorporation of progressive principles for learning. This would have solved most of the problems associated to the study.

Progressive/Exploratory Learning and

the Community College

This literature indicates that there does not yet exist a clear distinction or break

from the traditional setting for learning within the community college environment.

However, the study indicated that a progressive methodology for learning can be effective.

Wirth (1992) stated that there exists a void today in what might be deemed effective

community college education. He said that a call for reform to community college

education in both management and teaching are being demanded and are imperative for its

success. Zwerling (1976) indicated that community colleges need alternatives to learning

that would enable students to rise within society in ways that would reflect their true

potential. He stated that this was not the case in the traditional community college. The

learning environment created for this study was specifically set to be non-traditional in

nature. Instead, an autonomous learning adventure for the students involving exploration,

experience, awareness, and research created a pathway to a progressive understanding.

The students in this study through many experiences such as the evolution through the

values/needs analysis survey, the physical elevation difference survey, the model building

experiences, the interaction with news media and government officials, and the preparation

for the final presentation, to name some, learned by progressive principles. They struggled

to first understand the final objective and then by studying, researching, and exploring they

gained *further* understanding of how to reach the final goal. The students then worked

through a series of experiences in order to get closer to the goal which helped them realize

more unknown criteria needed for further progress toward the final goal. The unknown

prompted the students into further research and study which developed into more experiences and greater knowledge and understanding. This became a spiraling sequence of progressive learning which was incorporated throughout the entire project. This progressive learning methodology is not fully utilized in the traditional community college setting; however, it was effectively established during this study.

The literature indicates that community colleges typically today are not structurally organized to accept the looser learning methodologies incorporated in progressive principles. There will always exist, unless there emerges a significant change in the way community colleges approach learning, a barrier to the progressive/exploratory learning style. Bureaucracies cannot adapt quickly enough and are not free to expand their learning realms easily enough to incorporate progressive methods of learning. John Dewey advocated a radical departure from traditional formal studies in order to integrate people into society (Lauderdale, 1981). This departure, as of yet, in most community colleges has not happened. This is not to say, however, that it could not happen; it would just be difficult. Most worthy endeavors usually are not easy. In order for community colleges to effectively adopt the progressive learning principles as practiced in this study, a radical departure from the traditional formal studies expressed by Dewey would be necessary. The departure would include getting away from a structured curriculum including pre-established courses and standard class meeting times. Instead of a predetermined set of courses, a student would be involved in groups of experiences with other students pursuing similar goals these experiences would be integrated into the needs of community organizations and businesses to create not only real life applications but also add value and meaning to the process which would naturally increase motivation and

hence -- learning. Assessment would not be derived by testing instruments but would

become the subjective analysis of combined evaluators including those of several

coordinating educators, business mentors, and student peers. There would not be two

experience groups alike. Every student would progress according to their own individual

potential and in their own desired direction of study. These radical changes would affect

drastically the current way community colleges operate, their methods of teaching, the

way that they are governed, the way that faculty are evaluated, the way institutions are

accredited, and how society perceives them. Perhaps with the evolution into the sixth

generation of the community college, a new and different focus upon learning will become

a priority for all, promoting the necessary structural changes toward the establishment of

progressive/exploratory learning principles.

<u>Outside of the Classroom Learning</u>

The literature indicates that students can more fully develop a realistic sense of

their role in society along with valued learning applications when the learning at hand is

captured in an outside-of-the-traditional-classroom true to life environment (Aronstein,

Olsen, Nieman, Gregson). In this study students gained *real life* experience working for

an actual client, the city of Guthrie Oklahoma, in a realistic business environment on a true

job site. This real environment provided the participant students learning situations that

could not be duplicated in the traditional classroom. It would be an almost impossibility

to bring a real client, such as the City of Guthrie, Oklahoma, into a traditional classroom

setting. When students are placed into a realistic environment, they are then able to

experience the complexity of the multiple facets of the field of study and gain a greater

global understanding. The overall understanding and incentives or motivations for success, in a realistic situation, were evident in this study. The City of Guthrie became the employer who required commitment. The knowledge gained and new skills acquired along with the praise of the employer became the paycheck. The outside-of-classroom experience was an irreplaceable tool for learning in this study.

Experiential and Awareness Learning

A favorite statement of Chickering (1977) was that learning must be tested in action in order for learners to realize its full potential. In this study the student participants were able to gain many experiences that led to knowledge growth by testing their theories in action. Denise, Harris, and Thomas (1989) said that in experiential education settings, students are able to take on experiences that have real outcomes featuring *significant* tasks and *concrete* achievements. Through awarenesses, brought about by experiencing, the student participants were able to make many new connections with the architectural profession and gain a fuller architectural vision. This vision is one that many students do not completely grasp until they are actually out of school in a practicing environment where they are often unprepared by only the "book" knowledge they have received. They would then need to go back and waste productive time on the job to try and draw or learn correlations between the theory and the actual practice of their education. Do the students feel cheated? Are the employers disappointed? Society demands change. Perhaps today's technology education would be best taught by combining the old apprenticeship style of learning incorporating progressive principles.

In this study student participants were provided the opportunity to gain experiences in a global sense. Experiences ranging from situational such as dealing with dead lines, interacting with the public, news agencies and government officials, learning to work together in a team environment, and negotiating proposals and presentations, which were all integral parts of the learning process. These experiences were not obtained by predetermined traditional objectives but through a preplanned progressive environment for learning that led to opportunities that were not even thought of or realized by the students or the instructor in the beginning. One such unplanned example in this study was the development, publication and administration of the needs/values survey instruments. Also, application learning such as research, surveying, drawing, CAD, model building, and design were a very important part of the experiences gained in this study. Theoretical concepts such as problem solving, researching conceptual design, and futuring were considered critical to the project's success and incorporated into the study through experiences and awareness. Dewey (1938) proliferated experiential learning as the catalyst for all learning. He said learning environments should be created which would contribute to the building of worthwhile experiences. The building of a worthwhile experiential learning environment was the primary focus of this study. This study, very progressive in nature, was driven by experiences and the gaining of understanding through awarenesses. This brought a rich learning opportunity for the students which had a fuller focus and a global potential.

Problem Solving

Stern, Stone, Hopkins, McMillion, and Crain (1994) indicated that students will gain a much more far reaching benefit in competence, confidence, and potential when faced with the dilemma of problem solving while learning. This study provided many important opportunities for student participants to grapple with problems, make decisions, carry on with their programmed plans, and deal with the decisions they made whether good or poor. When the decision was made to use the layering technique on the second model base, it was time consuming; it exhausted an expensive amount of materials, and it made the base too heavy. This was a poor decision that was corrected in the next base. Instead of layers the student solved the problem and tapered supports according to grade change with only two layers for the base which alleviated all of the previous problems. The students worked through the problem of how to assess the heights of all of the buildings. They grappled with and discussed several possibilities and finally decided that by taking pictures of each building front with a person standing by it, a reasonable estimate could be achieved by multiplying that person's height in respect to the building. The research component, which became so vitally important to the success of the project, was also a result of learning through experiences, struggles and solving problems. The students, through their experiences became profoundly aware of the need to research the historical aspects of the city of Guthrie, Oklahoma. They realized that in order to prepare an architectural proposal for the future a greater understanding and appreciation of the past would be necessary. Because of the need to know everything about Guthrie, its history, its values, its aspirations for the future, the project participants became students of

Guthrie and studied "Guthrie" as a topic. As a result of these kinds of experiences, dealing with problems and the ramifications, the student participants were able to grow more competent, confident, and grow in potential. As the project progressed the students became more confident and competent about what they were doing. This is similar to persons who enter the job force. With time they gained more expertise in their responsibilities and can make more competent decisions. The students in this project experienced a similar situation which gave them also similar gains. This provides a great base of social skills and social confidence. As these students enter the work force and become active in our society, they will be a step ahead in competence and making relevant decisions.

Service-Learning

By definition Service-Learning is a method by which people learn and develop through active participation in thoughtfully organized service experiences that meet actual community needs, which coordinate in collaboration with an institution of education, that are integrated into each student's academic pursuits, that provide structured time for the students to grapple with problems, that provide students the opportunities to use newly acquired knowledge and understanding in real life situations, that enhance and reinforce what is taught in other educational settings, and that will help to foster and develop a sense of caring for others (Kinsley, 1994).

The definition of Service-Learning in this study was ratified by each of the student participants and the city of Guthrie Oklahoma. This study resulted in learning through active participation in thoughtfully organized service experiences that met actual

community needs, that coordinated in collaboration with an institution of higher education, and that integrated into each student's academic pursuits. The project provided structured time for the student to think, talk, interact, solve problems, and write about what they saw and did during the service activity, created opportunities for the students to use newly acquired awarenesses, experiences, skills, and knowledge in real life situations in their own communities, enhanced and reinforced what had been taught in their other classes, and fostered and developed a sense of caring for others. Thus the Service-Learning definition reflects what was learned, what happened, and what was experienced during the study by the student participants and the city of Guthrie Oklahoma. In this study Service-Learning was a strong component of the progressive learning approach incorporated during the project. A strong conclusion identified in this study is that Service-Learning is progressive and adapts itself very well to the principles of progressive learning. Service-Learning can be a powerful tool or technique for the enhancement of learning possibilities in a progressive environment.

Implications

The major future implications for learning provided by this study are as follows:

1. Progressive education using experiential, awareness learning techniques and the incorporation of service learning can be effective learning methods for community colleges.

In this study the potential for the effectiveness of progressive education principles including experiential and awareness which incorporates service learning was realized. This point has significance for the future of community college education. The results of

this study indicated that these methods of learning are highly productive for community college students.

2.   *The possibility of combining experiential educational and Service-Learning concepts together provide a learning experience where students learn globally while giving back to the community at the same time. This type of learning can have long lasting social effects on communities and students alike.*

Service-Learning concepts are progressive education. All of the principles incorporated into progressive education are exhibited in service learning. Service-Learning capabilities further enhance progressive education principles while giving service to individuals, a community, or society in general. Therefore, Service-Learning is the greatest form of progressive education that can be accomplished. Students feel needed and the community feels valued, and thus society as a whole is enriched and linked toward a common goal.

3.   *Communities, organizations, and society are ready and willing for partnership and involvement in Service-Learning possibilities.*

This study found the City of Guthrie, Oklahoma very ready and willing to participate in a Service-Learning progressive educational experience. At the finish Guthrie City was very appreciative and positive about the outcomes of the project. With community exposure to similar projects, the educational possibilities and even requests for new partnerships would increase.

4.   *Service-Learning concepts potentially could become an integral part of the comprehensive mission of community colleges as it applies to giving service back to the communities serviced by them.*

Part of the comprehensive mission of the community college is to reach out and serve the community. The concept of Service-Learning directly addresses itself to the mission of the community college. As the community college emerges into the sixth generation, it should seriously explore the benefits of service learning into its evolving mission.

5. *Community college students gain a greater appreciation for the selected field of study in an environment that can tie all learning applications together.*

The students in this study were able to see the connecting parts of the architectural profession as they were all applicable to the project being done. This was optimal because they then could gain a more complete understanding of the goals associated to the project and connect that with a real architectural setting. Traditional education provides only bits and pieces of the whole through diverse courses that then need to be sewn together at the finish of one's education in the hope that connections can be drawn at that point.

6. *The possibilities of gaining a global learning experience through a similar project application is greater as compared to traditional methods that matriculate several courses together.*

The students in this study were able to explore and acquire a more global understanding of the issues associated with the field of architecture. This was a result of a progressive educational setting provided in order for them to examine many aspects of learning at the same time that would not necessarily be a part of a compartmentalized traditional course by course approach to learning.

7. The possibility to expand from the traditional thought for education for community colleges should call for a redefinition of the way community colleges today facilitate education.

In order for community colleges to effectively incorporate progressive education principles and service learning, there needs to take place a significant change from the way they facilitate education today. This would involve a change in the way they schedule classes, organize curriculum, evaluate students and faculty, and are self evaluated and accredited.

8. A progressive learning environment can provide learning opportunities and potentials for learning beyond a traditional approach which incorporates predetermined set objectives.

The learning outcomes realized in this project were far more than what were originally predicted. Through a series of progressive experiences, the students were able to set and reach their own objectives to reach the final goal. This process produced more learning objectives than could have part of a traditional course.

9. Community college students are receptive to and are not uncomfortable with the change from the traditional method of learning to progressive principles and service learning.

This study found that the community college students involved were notably comfortable with progressive principles of learning and preferred the project experience as compared to traditional courses.

10. Ethnic, gender, and age differences provided no discrepancies in collaboration as groups interact and work together and draw from each other's experiences in a Service-Learning environment.

The students in this study though very different in age, gender, and race, worked and collaborated together well. In the Service-Learning progressive environment, the students were more interested and in fact dependent upon what each other could contribute than other issues.

11. When in learning environments rich with real life experiences and service learning opportunities, students gain greater motivation toward learning which then has a more significant purpose.

The students in this study were motivated naturally by the realistic working environment and the capacity to create a product in which they were *true* investors. The aspect of providing a service to the community of Guthrie became a humanistic source of motivation as the students gained greater realization of and an appreciation for the community and its people.

Recommendations for Practice

There is substantial information in the current literature supporting the effectiveness of progressive education using experiences and awareness. There are also many examples of the application of Service-Learning concepts in educational settings. The major recommendation for practice from this study is that the *community colleges* combine and adapt the concept of progressive education and Service-Learning as a mainstream and viable option to education. The community college mission as it has

evolved over the past 100 years has already embraced the concept of serving the community base and addressing the career education needs of its constituents. By adopting the learning principles exemplified in this study, the community college would be better fulfilling these areas of its mission. Combining progressive principles with the practice of service learning techniques seem tailor made for the community college environment. In order however, to incorporate this, community colleges need to reevaluate the administrative and facilitative aspects of how they operate. This study produced significant possibilities for learning enhancement, yet many of the community college political and structural aspects would have to change in order to include these proposed learning methodologies. Those changes would need to reflect the modifications specified earlier in this chapter. These would include the departure from a structured curriculum and pre-established courses with standard meeting times, involvement more with a series of group activities with other students pursuing similar educational goals integrated into the needs of community organizations and business, eliminating traditional methods of assessment and utilizing more of a construct subjective method involving educators, business mentors, and peers, and maintaining an autonomous environment for learning so that each student can be a direct participator in their educational pursuits toward their individual and personal educational desires. It is recommended that community colleges seek a departure from the traditional compartmentalized course by course learning methodology and as an alternative community colleges should incorporate group experiential learning environments based upon real life situations and incorporating service learning ideals. This should be a requirement for all career seeking students in order to gain the culmination of career preparation for all related technical degrees.

Service-Learning is a concept that already correlates with the five part comprehensive mission of the community college. I recommend that community colleges must find ways to incorporate these ideals into the curriculum. Learning based upon progressive principles incorporating Service-Learning is a concept that socially benefits all who are involved.

In this study, a great deal of success in learning was realized as student participants *experienced* their education. Through real life experiences the student participants became aware of facets of the learning and gained a sincere desire to gain more knowledge which spurred further awareness and so on. This upward spiral effect of learning became a crucial asset to the success of the project and an important aspect of this study. Outside of the classroom experiential learning which is driven by student awareness is highly recommended and supported through this research as an effective mode of learning.

Students have increased motivation to learn when there are added benefits attached and when they understand the reasoning behind it. The natural benefits of being motivated to learn brings personal growth, a higher standard of knowledge, and personal gratification. Another point of this study found that students receive personal gratification when giving service to others. They were also able to gain during this project legitimate work experience and a valid component to be placed on their future resumes. The learning aspects of Service-Learning concepts are well documented and substantiated, but the motivational factors behind service learning need also to be identified. Service-Learning is a great motivator for students to do well because the outcome is more important to them than just the personal gratitude. It would be a recommendation of this study to utilize Service-Learning not only as a great provider of applicable learning

opportunities but also as a <u>motivator for students to learn at their best</u> in order to help others.

This study found that Service-Learning is an effective way to incorporate real life learning experiences. It is recommended that progressive education in community colleges incorporate Service-Learning concepts in order to facilitate a more complete educational experience and socially beneficial quality for learning preparing the learners to contribute sooner and at greater levels to both commercial and social productivity in our world.

It is also recommended that group participation and group problem solving techniques be applied within the progressive learning environment. This study found that students in a progressive environment are less concerned with age, ethnic, and gender differences and show an increased interest in the collaborative strengths of individuals within the group which leads to greater success in solving problems.

It is recommended that projects similar to the one used in this study be incorporated into further learning possibilities with other institutions of higher education. Many similar situations exist for the opportunity for Service-Learning. Communities all over this nation are in need of assistance of architectural assistance. Institutions of higher education could use this notion in order to put themselves into a position to provide students with a wonderful opportunity for learning and at the same time rendering *meaningful* service to the community.

Recommendations for Further Research

Throughout this study there were issues brought up that might be considered for

further research on similar concepts. The conclusions of this study, based upon qualitative

research strategies, were evident and provided considerable direction in learning

possibilities based upon progressive/ experiential and awareness learning applications for

community college students; however, additional research could provide additional

directions for these possibilities that this study did not fully address.

One issue that this study brought out, but did not address, was the evolution of the

community college concept along with its evolving mission. A consideration might be

given to further research in order to identify if the evolution of the community college

might provide an avenue for progressive learning into its learning structure. The question

at hand is, can community college systems adapt their bureaucratic structures enough to

adopt a truly progressive style of learning and *how*?

Another issue brought out in the study but not fully addressed was the validity and

effectiveness of progressive/experiential learning based on awareness and Service-

Learning for all non-traditional students. Most of the student participants in this study had

been going to school together for quite some time and had developed relationships with

each other and the researcher prior to the study. It is not known how much this would

bias the relevance of the study. It would be worthwhile to conduct research on a broader

scale that would represent more fully all non-traditional students. It is recommended that

there be further research conducted that might assess the effectiveness of these learning

methods for all non-traditional community college students. This study concentrated on a

very small group of participants, using a case study approach, and may not have captured the relevance to all non-traditional students.

This study was limited to the specific technical education field of architecture. Would similar learning methods be equally effective applied to other technical education learning emphases?

Additional research should be conducted to explore the possibilities of collaborative learning based upon the combination of group members who are different in age, gender, and race. Do these issues have a significant effect upon how groups in an educational setting respond to challenges and how they deal with the challenges toward educational success?

Further research needs to be conducted on the correlations of motivation factors associated with experiential learning based upon Service-Learning concepts and the traditional learning methods. Are they similar or are there significant differences in motivations?

Additional research is necessary to compare success rates of students who participate in progressive learning environments based upon Service-Learning concepts to those students who are cultivated in the traditional learning environment. Are there any significant differences between the success rates of the two learning methodologies?

Closing

This study revealed that progressive education and service learning are ideal concepts for the community college environment. These learning methods lend themselves ideal most specifically for the technical career options in community colleges

because of the emphasis in the community college mission statement which focuses on career preparation and community evolvement. These learning methods are ideal because the traditional method does not consider the global aspects of learning; the traditional method is mostly theoretical in nature, is not realistic in application, and does not connect the various aspects of the field of study. OJT or on the job training and apprenticeships are realistic and global but fail to allow the time element for students to make mistakes and then solve problems which cultivate awareness and gaining a greater understanding. If organized correctly, progressive education with service learning can provide the most effective learning possibilities for students involved in career education studies.

The effects of this study are evident; progressive/exploratory learning based upon awareness and Service-Learning are important aspects of learning methods and should be considered as effective learning tools. The battle to be fought in order to realize the effectiveness of these tools, is to have information similar to this study brought to the attention of all educators especially those who are in positions to make decisions, i.e., community college presidents, the national community college organizations, and national vocational organizations, for the future of community college and higher education.

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APPENDIXES

APPENDIX A

COMMUNITY SURVEY

EFFECTIVENESS SURVEY
GUTHRIE, OKLAHOMA
DOWNTOWN BUSINESS AREA PROPOSAL
SEPTEMBER 17, 1996

1. Were you encouraged or impressed by the proposal for the potential enhancement of the historic downtown area of Guthrie, Oklahoma prepared by students from OSU-OKC?

    Yes:_____   Somewhat:_____   Not Very:_____   No:_____   ?:_____

2. Did you feel that the presentation given by the OSU-OKC students on their proposal for the potential enhancement of the historic downtown area of Guthrie, Oklahoma was done in a professional and clear manner?

    Yes:_____   Somewhat:_____   Not Very:_____   No:_____   ?:_____

3. Did it appear that the OSU-OKC students were well informed and prepared in their presentation for the potential enhancement of the historic downtown area of Guthrie Oklahoma?

    Yes:_____   Somewhat:_____   Not Very:_____   No:_____   ?:_____

4. Could you please make additional comments, observations, and or suggestions on the *effectiveness*, positive or negative, of the proposal prepared by the students of the historic downtown area of Guthrie, Oklahoma.

    _____

    _____

    _____

    _____

    _____

    _____

APPENDIX B

NEWS RELEASES AND

PUBLICITY

OSU-OKC working on plan for historic downtown Guthrie

History is the focal point of a cooperative project between OSU-Oklahoma City and the City of Guthrie.

Started last November, the project proposed to the Guthrie City Council was a summer semester project in which a group of OSU-OKC architecture and construction students would come to Guthrie to survey, evaluate and present and proposal on what could be done to further enhance the downtown area.

"Enhance is a crucial word on this project," says Kevin Burr, OSU-OKC Engineering Technology Division head. "We were out surveying one day and a lady said, 'You're not going to widen our streets are you?' I explained that the OSU-OKC project would only make recommendations to preserve and enhance what is already historical and beautiful."

Guthrie has provided about 800 square feet of office space near the city offices in historic downtown. In this space OSU-OKC has set up an operating architecture shop with drafting tables, four Computer Aided Design (CAD) systems, a plotter and more.

The group began their work by doing research on the history of Guthrie

and created a survey instrument to determine community values. Two different groups were surveyed: downtown Guthrie business people and a random sampling of Guthrie citizens. Both groups surveyed were strongly interested in economic development of the downtown area through increased tourism. This data provided the group with a direction and focus.

The project goal is to provide city officials with a formal proposal at the end of the semester. This will serve as a master plan for potentail restoration and redevelopment of downtown Guthrie.

Included in the plan will be a three dimensional model and architectural renderings for existing and proposed structures. Also, included will be possibilities for long-term development of the downtown area.

A MODEL EFFORT

History is the focal point of a cooperative project between Oklahoma State University-Oklahoma City and the City of Guthrie.

Last November, Kevin Burr, OSU-OKC engineering technology division head, met with the Guthrie city council to get approval for the joint venture. Proposed was a summer semester project in which a group of OSU-OKC architecture and construction students would come to Guthrie to survey, evaluate and present a proposal on what could be done to further enhance the downtown area.

"Enhance is a crucial word in this project," says Burr. "We were surveying one day and a lady said, 'You're not going to widen our streets are you?' I explained that the OSU-OKC project will only make recommendations to preserve and enhance what is already historical and beautiful."

Guthrie has provided 800 square feet of office space near the city offices in historic downtown Guthrie. In this space OSU-OKC has set up an operating architecture shop with drafting tables, four computer aided design (CAD) systems and a plotter.

The student group began by researching Guthrie's history and creating a survey instrument to determine community values. Two different groups were surveyed: downtown Guthrie business people and a random sampling of Guthrie citizens. Both groups were strongly interested in economic development of the downtown area through increased tourism. This data gave the OSU-OKC project direction and focus.

The project goal is to provide city officials with a formal proposal that can serve as a master plan for potential restoration and redevelopment of downtown Guthrie. Included with the plan will be a large three dimensional model and architectural renderings for existing and proposed structures. Also included will be possibilities for long-term economic development of the downtown area.

Eight OSU-OKC students participated in the two "Guthrie Experience" courses. "Although a lot of hard work has been involved, the students have found the project exciting and rewarding," says Burr, "and the hands-on experience gained by the students is extremely valuable to them professionally. It has been a team effort by the group from the beginning, whether surveying, analyzing data or implementing decisions."

SHARON LEE
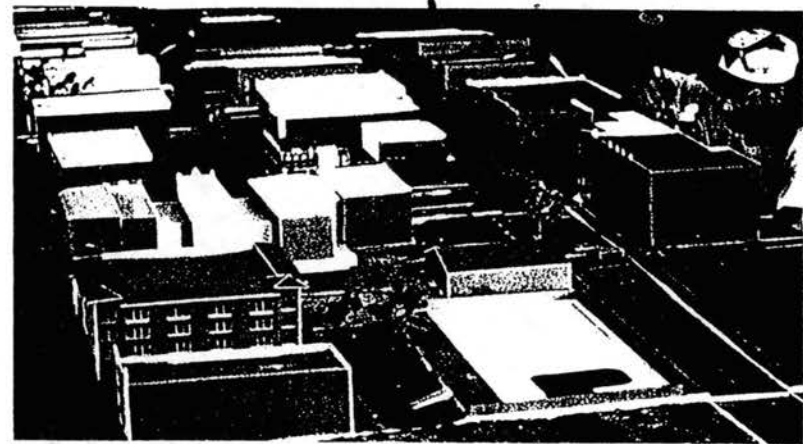
OSU-OKC architecture and construction students evaluated Guthrie's historic downtown district and then created a large model of existing and proposed structures. The project also included offering suggestions to city officials for long-term economic development of the downtown area.

THE DAILY OKLAHOMAN/OKLAHOMA CITY TIMES   I   Friday, August 2, 1996   **11**
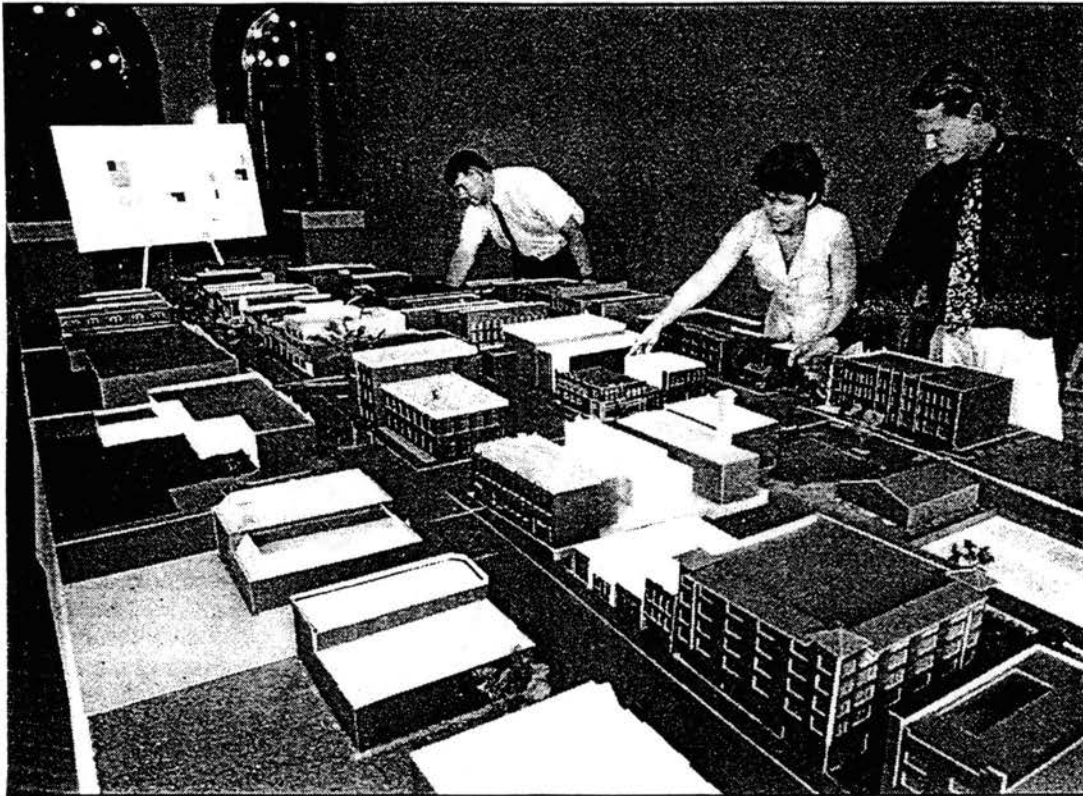
—Staff Photo by Jim Beckel

Model of Guthrie on Display

████ ████, right, watches ████████ adjust the roof of the Blue Belle Saloon on the model she and other architectural students from Oklahoma State University-Oklahoma City are building as a part of a survey of Guthrie's historic downtown. Instructor Kevin Burr, left, is inspecting the students' work, which is on display at the Territorial Museum and later will be moved to a permanent home in Guthrie's new City Hall.

APPENDIX C

GUTHRIE CITY RESOLUTION

#96-26

RESOLUTION NO. 96-26

WHEREAS, the Engineering Technologies Division, Oklahoma State University, recently completed a summer research program in corporation with the City of Guthrie creating a model representation of the historical district in the City of Guthrie; and

WHEREAS, Kevin Burr, Division Head of Engineering Technologies Division, who has created an image of how the City of Guthrie could become with his vision and dedicated research of the historic buildings located within the territorial City limits; and

WHEREAS, Mr. Kevin Burr and Dr. Jerrilee Mosier, Vice Provost for Academic Affairs, Oklahoma State University are presenting the completed model to the City of Guthrie to be displayed in the new Public Works Administrative Offices/City Hall.

BE IT RESOLVED BY THE COUNCIL OF THE CITY OF GUTHRIE, OKLAHOMA:

SECTION 1.
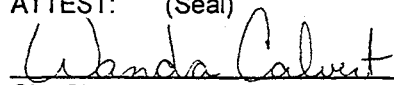
The City of Guthrie officially thanks Mr. Kevin Burr and Dr. Jerrilee Mosier upon promoting a good working relationship with the City of Guthrie and their efforts and contribution to the historic district located within the City of Guthrie, Oklahoma, and all of the students who participated in the research and completion of the project

ADOPTED AND APPROVED this _17th_ day of _September_ 1996.

_____
Mayor

ATTEST: (Seal)

_____
City Clerk

APPENDIX D

OSU-OKC 1997-98 COURSE

CATALOG

Oklahoma State University
Oklahoma City

⬤OSU
OKLAHOMA CITY

Catalog 1997-98

OKLAHOMA STATE UNIVERSITY - OKLAHOMA CITY

Oklahoma State University-Oklahoma City (OSU-OKC) is a North Central Association accredited, state-assisted public two-year college serving one of the fastest growing metropolitan cities in the country. Located in the heart of Oklahoma City at the crossroads of Interstate 44 and Interstate 40, this campus enrolls approximately 4,500 full and part-time students each semester. OSU-OKC has grown from a campus of one building with fewer than 100 students in 1961 to a campus that today consists of 80 acres, nine modern buildings, 227 faculty, and a staff of 157 caring and committed people.

Offering 25 associate in applied science degree programs with numerous areas of emphasis, eight associate of science degree programs, a variety of certificate programs, and developmental education courses, the Oklahoma City campus takes pride in its student-centered approach to collegiate education. Curriculum is designed in response to local employment needs and with input from professionals who serve on OSU-OKC advisory committees. All energies are directed toward one goal, blending both academic and student support services to create a collegiate educational experience, which addresses the needs of the individual student.

The Oklahoma State University System

Oklahoma State University-Oklahoma City is one of three campuses of the Oklahoma State University system. The other two campus' are Oklahoma State University-Okmulgee, and the College of Osteopathic Medicine of Oklahoma State University, Tulsa. The main campus is located 80 miles northeast of Oklahoma City in Stillwater, Oklahoma. The chief executive officer of the Oklahoma City campus holds the title of Provost and has Vice-Presidential rank in the Oklahoma State University system. The governing board of all four Oklahoma State University campuses, as well as Langston University, Oklahoma State Panhandle University, Connors State University, and Northeastern Oklahoma State University is the Board of Regents for Oklahoma State University and the A&M Colleges.

The Philosophy

Oklahoma State University-Oklahoma City operates in the belief that each person should be:

* *treated with dignity and respect,*
* *afforded equal opportunity to acquire a complete educational experience,*
* *given an opportunity to discover and develop their special aptitudes and insights,*
* *provided an opportunity to equip themselves for a fulfilling life and responsible citizenship in a world characterized by change.*

The Mission

The mission of Oklahoma State University-Oklahoma City is to provide collegiate level career and transfer educational programs and supportive services, which will prepare individuals to live and work in an increasingly technological and global community.

The Function

* Maintain an open-door policy, which will provide access to higher education for all eligible individuals, to treat all students fairly and equally and with no discrimination, regardless of social, economic or academic background.

* Provide learning opportunities for students to complete an Associate in Applied Science degree, an Associate of Science degree or Certificate Program primarily in technical education.

* Prepare students for upper division academic study at a four-year college or university.

* When appropriate, to participate in reciprocal and cooperative relationships with educational and various other types of institutions.

* Provide students the opportunity to acquire the knowledge and skills that will enable them to accomplish specified career or personal educational goals.

* Provide a developmental studies program to enable students to be successful at the college level.

* Provide a complete student services program, including academic advisement, career planning and placement, enrollment management, counseling services, judicial programs and services, admissions and records, minority student programs and services, veteran services, student activities, financial aid, assessment, student support services and child care.

* Conduct workshops, seminars and conferences to accommodate the needs of local business, industry and community groups on a non-credit basis.

- Engage in a broad campus-wide program of assessment and improvement, including regular and systematic review of program and funding sources, to conduct long- and short-range planning, and to provide and encourage faculty and staff development activities to meet our stated goals and to improve efficiency and effectiveness.

Student Profile

The diverse student population of OSU-Oklahoma City reflects the varied mix of its metropolitan location. People from all age groups, social, and cultural backgrounds pursue academic and occupationally-related collegiate studies. In order to accommodate the totally commuter student body, classes are scheduled throughout the day, evening, and weekends.

Students come from 41 Oklahoma counties, twenty two foreign countries and 12 different states, with the majority enrolling from Oklahoma City and surrounding communities. Forty percent of the University's students have had previous college experience. Three percent of the students have previous degrees. Fifty-two percent of the student body are women and 48 percent are men. Minorities (including Black, Hispanic, Native American, and Asian) make up 19 percent of the student body. The average age for OSU-OKC students is 29. (Source: Office of Institutional Research).

Adult students are a prized group on campus. The average student age is 29. Older students face different issues than the recent high school graduate when attending college. There are family responsibilities, job commitments, the fear of returning to school after many years, financial pressures, and many other priorities which require juggling and attention. The faculty and staff understand these needs and work to accommodate the lives of busy adults.

Facilities

Oklahoma State University-Oklahoma City is located at the corner of N.W. 10th Street and Portland, directly across from the State Fairgrounds. Development of the campus began in 1970 with construction of the Business Technology Building (formerly the Administration Building), and now includes nine build-

ings as well as Oklahoma City's Fire and Police Training Centers and the OSU-Oklahoma County Extension.

OSU-OKC buildings include:
- The Child Development Center, located on the southwest corner of N.W. 10th and Portland, provides child care for more than 80 children of students, faculty, staff and the community. It is accredited by National Association for the Education of Young Children (NAEYC).
- The Student Center, a modern 66,000 square foot facility opened in April 1994. Built with a "One-Stop Shopping" concept for students in mind, it houses the offices of Admissions, Records, Financial Aid, Counseling, Assessment, Student Support Services, the Bookstore, Wellness Center, game room and dining hall, student government offices, student lounges and study areas; and a full-service conference center.
- Dedicated June 22, 1995, the four-story Learning Resource Building is located in the center of the north academic area. It contains an expanded library, learning assistance labs, The Learning Center, Student Activities, Family Resource Center, as well as several new classrooms and auditoriums.
- The southern part of the campus is the home of the John E. Kirkpatrick Horticulture Center and a large open area for future development of laboratory buildings, landscape gardens, and a four-hole golf course for turf management courses.

Complementing the OSU-Oklahoma City campus are the main campus in Stillwater, the campuses in Okmulgee

and Tulsa, and a multitude of off-campus centers and experimental stations across Oklahoma as well as OSU's own satellite which brings education to the world.

Accreditation

Oklahoma State University-Oklahoma City is accredited by and is a member of the North Central Association of Colleges and Schools. The Oklahoma City branch became a separately accredited unit of Oklahoma State University in 1975. The college is also fully accredited by the Oklahoma State Regents for Higher Education. This accreditation assures the transferability of credits from this college to other colleges and universities within the state of Oklahoma. Several academic programs have received additional accreditation status from their corresponding professional boards, councils or regulatory groups. Specific program accreditation's are included in the academic program section of this catalog.

Affirmative Action Program

Oklahoma State University's Affirmative Action Program reflects the University's commitment to equal employment opportunity and outlines the procedures necessary to fulfill this commitment. OSU and members of its system are committed by Board of Regents policy to promote equal opportunity in all phases of university life for all persons within its constituency. OSU has devised action-oriented programs designed to remove tangible and intangible barriers to equal opportunity thereby demonstrating through the success of these programs that the goals of equal opportunity held by the American society are attainable.

American Disabilities Act (ADA) Program

Chapter II Coordinator
Martha Thompson, 945-8634
Learning Resource Center, Second Floor

Title 504 Physical Access Coordinator
William "DeWayne" Plemons, 945-8649
Administration Building

OSU-OKC is committed to serving the needs of students with disabilities. Consistent with the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, "qualified handicapped individuals" shall not be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any federally funded program or activity solely by reason of disability. Qualified individuals with disabilities are specified by federal guidelines listed in this section under Definition.

It is the responsibility of each student with a disability at OSU-OKC to notify the college of such disability and make an official Request for a Reasonable Academic Accommodation. These requests should be filed with the Chapter II ADA Coordinator. Through that area students, faculty, and staff can receive information and assistance in determining the need for, and type of, reasonable academic accommodation.

Upon request for a reasonable academic accommodation, the Chapter II ADA Coordinator advises the student concerning the process, which includes general information about the student's academic goals and required documentation of the individual's disability.

In most instances, the student can progress through a chosen degree program with adjustments facilitated through the Chapter II ADA Coordinator and appropriate academic personnel. When a student makes a request that substantially impacts a plan of study and when all other alternatives have been explored, the following procedures will be followed.

Procedures

The Chapter II ADA Coordinator will counsel the student with a disability concerning reasonable academic accommodation relative to their degree program.

Due to privacy issues, a formal request initiated by the student is required before the Chapter II ADA Coordinator will notify (in writing) all parties of the request for a reasonable academic accommodation.

This notification includes the request for reasonable academic accommodation and a statement from the Chapter II ADA Coordinator certifying the disability and recommending a reasonable academic accommodation. The notification goes to the student's advisor, the Vice Provost for Academic Affairs, the Vice Provost for Student Affairs, appropriate faculty and the Department/Division Head with administrative oversight for the course or requirement in question.

The above-listed individuals will review the request for a reasonable academic accommodation and make a recommendation to the Department Head.

The Department Head has the responsibility to coordinate and implement all reasonable academic accommodations. Should he or she determine the accommodation request presents an "undue hardship" as defined by Section 504 regulations, the specific reasons for such hardship will be forwarded to the Vice Provost for Academic Affairs for further determination. Once the specific accommodation plan has been fully coordinated or the request for an undue hardship exception has been upheld, copies of the decision will be forwarded to the adviser, faculty, the Department/ Division Head, and the ADA Coordinator. Modifications to academic requirements should be made as necessary to ensure that such requirements do not discriminate or have the effect of discriminating. Section 505, subpart (a) specifically states that, "Academic requirements that the recipient [OSU-OKC] can demonstrate are essential to the program of instruction being pursued by such students or to any directly related

licensing requirement will not be regarded as discriminatory within the meaning of this section." The ADA Coordinator will then notify the student.

If appropriate, legal counsel will be available to consult with all involved to provide advice.

All actions are subject to review by the Provost.

If the request is denied and the student with a disability seeks further redress, the ADA Coordinator will advise the student of the proper procedures for filing a formal complaint using formal grievance procedures.

Definition

In order for a student to access services under the law, he or she must be handicapped. OSU-Oklahoma City defines handicapped as any person who:

- *has a physical or mental impairment, which substantially limits one or more of such person's major life activities,*
- *has a record of such impairment, or*
- *is regarded as having such impairment.*

It should be noted that a physical or mental impairment includes a) any physiological disorder or condition, cosmetic disfigurement, or anatomical loss affecting one or more of the following body systems: neurological; musculoskeletal; special sense organs; respiratory, including speech organs; cardiovascular; reproductive; digestive; genitourinary; hemic and lymphatic; skin; and endocrine; or b) any mental or psychological disorder, such as mental retardation, organic brain syndrome, emotional or mental illness, and specific learning disabilities.

ASSOCIATE DEGREES AND CERTIFICATES

Associate In Applied Science

The Associate in Applied Science degree signifies the completion of at least 60 semester credit hours of collegiate course work, which will place the graduate on a career path. Oklahoma State University-Oklahoma City offers 25 associate in applied science degree programs in five divisional areas. They are:

Agriculture Technology

- ◆ Horticulture Technology

Business Technology

- ◆ Accounting
- ◆ Computer Information Systems
  - *- Accounting Emphasis*
  - *- Business Information Systems Emphasis*
  - *- Computer Technical Support Emphasis*
  - *- Scientific Emphasis*
- ◆ Management
  - *- Management Emphasis*
  - *- General Business Emphasis*
  - *- Marketing Emphasis*
- ◆ Quality Management
- ◆ Technical Communications
  - *- Illustration Emphasis*
  - *- Internet Administration/Web Page Design*
  - *- Telecommunications Emphasis*
  - *- Writing Emphasis*

Engineering Technology

- ◆ Architectural Technology
  - *- CAD-Architecture Emphasis*
  - *- Interior Design Emphasis*
  - *- Pre-Architecture Emphasis*
- ◆ Avionics Electronics Technology
- ◆ Civil Engineering Technology
- ◆ Construction Technology
  - *- Building Inspection Emphasis*
  - *- Construction Management Emphasis*
- ◆ Electronics Engineering Technology
- ◆ Energy and Environmental Resource Management
- ◆ General Engineering Technology
- ◆ Heating, Ventilation and Air Conditioning Technology (HVAC)

- ◆ HVAC Environmental Systems Technology
  - *- Electrical Equipment for Building Emphasis*
  - *- Mechanical Systems Emphasis*
- ◆ Industrial Drafting and Design Technology
- ◆ Quality Assurance
- ◆ Surveying Technology

Health Services

- ◆ Nurse Science

Human Services

- ◆ Alcohol and Substance Abuse Counseling
- ◆ Interpreter Training
- ◆ Municipal Fire Protection
- ◆ Occupational and Environmental Safety
- ◆ Police Science

Cooperative Program

- ◆ Veterinary Technology
  - *- with Murray State College*

Associate Of Science

The Associate of Science degree is a program designed for transfer to an upper-division baccalaureate degree program. The Associate of Science degree is typically awarded to those who wish to major in subjects with heavy undergraduate requirements in mathematics and science, including, but not limited to, fields such as engineering and agriculture. It represents successful completion of a minimum of 60 credit hours, excluding any physical education courses. Oklahoma State University-Oklahoma City offers eight Associate of Science degree programs, listed below.

Agriculture Technology

- ◆ Horticulture Technology

Arts and Sciences

- ◆ Industrial Laboratory Technology
- ◆ Public Service*

Human Services

- ◆ Alcohol and Substance Abuse Counseling
- ◆ EMS/Health Care Management
- ◆ Fire Protection Technology
- ◆ Police Science
- ◆ American Sign Language

General Education

Division of Arts and Sciences

- ◆ English and Language Arts
- ◆ Humanities
- ◆ Laboratory Technology
- ◆ Life Science
- ◆ Mathematics
- ◆ Physical Science
- ◆ Social Sciences

Certificate Programs

For the student who finds it necessary to obtain a college credential in a shorter period of time than the associate degree program, Oklahoma State University - Oklahoma City offers a variety of certificate programs.

Agriculture Technology

- ◆ Horticulture
- ◆ Retail Floristry

Business Technology

- ◆ Computer Programming
- ◆ Management Development
- ◆ Office Automation Technician

Engineering Technology

- ◆ Construction Estimator
- ◆ Industrial Drafting
- ◆ Land Surveyor
- ◆ Microcomputer Electronics
- ◆ Systems Maintenance Administration

Human Services

- ◆ Signing Skills

Pending Regent's approval

DIVISION OF ENGINEERING TECHNOLOGIES

Architecture Technology

Between the architect's vision and the engineer's scientific method comes the important role of the architecture technician. Students learn drafting techniques and procedures to record the documentation required and the methods necessary to create building environments. Graduates are employed in a variety of architectural and construction positions with engineering and architectural firms as well as city, state and federal governmental agencies.

Associate degree emphases within the architecture technology area are: Pre-Architecture, CAD Architecture, and Interior Design.

Avionics Electronics Technology

The avionics electronics program emphasizes theory and application to enhance learning. This technician applies electronics theory, principles of electrical circuits, electrical testing procedures, technical mathematics, physics, and related subjects to design, build, repair and modify aviation equipment such as computers, communication equipment and automatic pilots. This degree program qualifies graduates for positions on the technical team in research and development, as engineering assistants, installation or maintenance technicians, and calibration technicians.

Civil Technology

The civil technology program at OSU-OKC incorporates design, use, and construction of public use facilities such as highways, bridges, airports, dams, canals and drainage systems. Materials testing, statistics, engineering graphics and hydraulics provide a firm core of engineering theory courses to support the technology curriculum. Graduates of this program are prepared to move into positions with engineering firms and governmental agencies.

Construction Technology

The construction technology program incorporates inspection, estimating, materials and selection use and construction procedures. Graduates are employed in construction positions with engineering and architectural firms as well as city, state and federal government agencies. The construction estimator certificate program is designed for persons who do not wish to obtain a college degree but need specialization for advancement in their field or to enter a new career.

Electronics Engineering Technology

An electronics engineering technology graduate acts as a liaison between the electrical engineer and the skilled worker. The electronics technician possesses some of the "know-why" of the engineer and the "know-how" of the craftsman. To provide the flexibility required in the electrical science and electronics industries, the curriculum offers a solid foundation in mathematics, science and electronics. Employment opportunities are excellent and graduates can anticipate profitable and rewarding careers in communication electronics, industrial electronics, computer electronics and automated manufacturing.

Energy and Environmental Resource Management

The energy and environmental resource management program presents a multi-disciplinary approach to meet the needs of today's competitive workplace. The program is based on mathematics, economics and science, and prepares the graduate to successfully vie for positions in both the energy and environmental arenas.

Environmental Systems Technology

The environmental systems technology associate degree offers exciting new options by combining elements from several different technologies into one overall curriculum. As the first program of its kind in Oklahoma, the environmental systems technologist will demonstrate a broad base of cross-over knowledge from three different areas - drafting and design, heating and air conditioning, and construction.

This unique combination of expertise makes the environmental systems graduate a person whose skills are readily marketable to a wide variety of businesses and industries. Areas such as systems design for fire protection, building com-

munication and building security, as well as positions within consulting firms, architect/engineering firms, contractors, vendors, or manufacturers will offer employment opportunities for the environmental systems graduate.

General Engineering Technology

Designed to provide a multi-disciplinary approach to the engineering technology associate degree, the general engineering program allows students to combine two different engineering technology specialties into one flexible program. This type of integration makes this program attractive to students who have completed 20 to 30 college hours in an engineering or engineering-related discipline at another college, but were unable, for one reason or another, to complete a degree. The general engineering program would thus allow that student to combine those major courses with another technology area, and the general engineering core courses, into an associate degree which could mean on-the-job promotion and salary increases. For the beginning college student, the general engineering program would permit specialty emphasis combinations that could include some of the latest high-tech oriented courses.

Heating, Ventilation and Air Conditioning (HVAC)

This program is designed to give students practical knowledge in equipment design, installation, inspection, maintenance and service of heating and air conditioning systems. Mechanical skills are combined with theoretical and practical knowledge to prepare graduates for careers in installation, service, sales, testing, and design of HVAC systems. Employment opportunities are readily available for the air conditioning and refrigeration technician.

Industrial Drafting and Design Technology

The industrial drafting and design technician interprets engineering data, receives instructions from the engineer, and then develops design layouts and working drawings to guide the production of tools, machines and mechanical products. The introduction of computer-aided drafting (CAD) into the program has provided students experience with one of the latest high-tech tools used in the engineering design field. Graduates are highly employable by engineering consulting firms, industrial manufacturing and production facilities and various governmental agencies in the capacity of engineering aids, drafters, technical illustrators and designers. A student may earn either an associate degree or a certificate in this field.

Quality Assurance

This program provides the student with fundamental knowledge and skills required of quality assurance personnel in a variety of manufacturing service areas. Classroom instruction provides a foundation in Quality Assurance technology, science, mathematics and general education. Included in the program is the opportunity to select special seminar topics to be taken as part of the degree program. Hands-on laboratory experience stresses the practical applications of the principles learned in class that are to be applied on the job.

Surveying Technology

The associate degree curriculum in surveying technology is designed to provide basic theoretical training with practical application. Students have an opportunity to become familiar with modern field and computational procedures used in routine and specialized surveying operations. Curriculum is designed not only to incorporate National Uniform Fundamentals materials but to prepare and enable an individual to sit for the licensure examination used by the Oklahoma State Board of Registration of Professional Engineers and Land Surveyors. Graduates are employed in both private and governmental surveying services. The land surveyor certificate program is designed to equip the student with the basic competencies necessary for employment as a surveying technician.

For More Information Contact Division Head:

Kevin Burr
Engineering Technologies
Engineering Technology Building
Room 300
900 N. Portland Ave.
Oklahoma City, Oklahoma 73107
(405) 945-3220

Faculty:

Dee Brower - Department Head
Kevin Burr - Department Head
Jim Chambers
Mike DeLong
Otis Hill
Scott Millington
Don Schmidt
Don Welch - Department Head
Dr. Neal Willison- Department Head

ARCHITECTURAL TECHNOLOGY — CAD-ARCHITECTURE EMPHASIS

Program Description

This program is designed to provide the student with the skills and knowledge required for employment in one of many areas of the largest industry in America. The technical content of the program is intended to supply a wide background in the diverse areas of applied architecture and construction.

Employment Information

Graduates of this program can expect to find employment in many areas of the architectural and building construction fields. Each area may require somewhat different abilities and specialized knowledge and skills for a successful career.

Graduates are prepared to accept positions as architectural technicians, architectural drafters, estimators, planning technicians, inspectors, residential designers, sales representatives or any one of the many jobs within the industry requiring specialization. The U.S. Department of Labor reports that employment opportunities for engineering technicians are expected to be excellent throughout the 1990's.

Degree Awarded

Associate in Applied Science

For More Information Contact:

Don Welch
Interim Department Head
Architecture Technologies
Engineering Technology Bldg.
Room 300
(405) 945-3356

Technical Occupational Specialty   28 Credit Hours

ARCH	1223	Construction Drawing I	3
ARCH	1614	CAD I	4
ARCH	2050	CAD Special Projects	1-6
ARCH	2063	CAD Systems Management	3
ARCH	2013	Construction Drawing II	3
ARCH	2613	CAD II	3
CONS	2253	Construction Drawings & CAD	3
CONS	2333	Construction Practices & Procedures	3
INDT	2403	CAD 3D Modeling	3
INDT	2411	CAD Customizing	1

Technical Occupational Support   8 Credit Hours

ARCH	1103	Printreading	3
ARCH	2263	Systems & Materials	3
ARCH	2322	Construction Specifications	2

Technical Occupational Related*   12 Credit Hours

Select 12 credit hours.

General Education Courses   19 Credit Hours

ENGL	1113	Freshman Compostiion I	3
ENGL	2333	Technical Report Writing	3
HIST	1493	U.S. History Since 1865	3
MATH	1513	College Algebra	3
PHYS	1014	Descriptive Physical Science	4
POLS	1113	American Government	3

Total to Graduate   67 Credit Hours

Department Head approval required.

ARCHITECTURAL TECHNOLOGY — INTERIOR DESIGN EMPHASIS

Program Description

This program is designed to provide the student with the skills and knowledge required for employment in one of many areas of the largest industry in America. The technical content of the program is intended to supply a wide background in the diverse areas of applied architecture and construction.

Employment Information

Graduates of this program can expect to find employment in many areas of the architectural and building construction fields. Each area may require somewhat different abilities and specialized knowledge and skills for a successful career.

Graduates are prepared to accept positions as architectural technicians, architectural drafters, estimators, planning technicians, inspectors, residential designers, sales representatives or any one of the many jobs within the industry requiring specialization. The U.S. Department of Labor reports that employment opportunities for engineering technicians are expected to be excellent throughout the 1990's.

Degree Awarded

Associate in Applied Science

For More Information Contact:

Don Welch
Interim Department Head
Architecture Technologies
Engineering Technology Bldg.
Room 300
(405) 945-3356

Technical Occupational Specialty 35 Credit Hours

ARCH	1123	History of Interiors & Furniture	3
ARCH	1133	Textiles & Materials of Interiors	3
ARCH	1143	Interior Design Studio I	3
ARCH	1213	Design I	3
ARCH	1223	Construction Drawing I	3
ARCH	1614	CAD I	4
ARCH	2213	Design II	3
ARCH	2023	Survey of Environmental Systems for Interiors	3
ARCH	2033	Professional Practices in Interiors	3
ARCH	2043	Interior Design Studio II	3
ARCH	2044	Architectural Presentation	4

Technical Occupational Support 5 Credit Hours

ARCH	2263	Systems & Materials	3
ARCH	2322	Construction Specifications	2

Technical Occupational Related* 9 Credit Hours
Select 9 credit hours.

General Education 18 Credit Hours

ENGL	1113	Freshman Compostion I	3
ENGL	2333	Technical Report Writing	3
HIST	1493	U.S. History Since 1865	3
MATH	1513	College Algebra	3
MATH	1303	Business Mathematics	3
POLS	1113	American Government	3

Total to Graduate 67 Credit Hours

*Department Head approval required.

ARCHITECTURAL TECHNOLOGY — PRE-ARCHITECTURE EMPHASIS

Program Description

This program is designed to provide the student with the skills and knowledge required for employment in one of many areas of the largest industry in America. The technical content of the program is intended to supply a wide background in the diverse areas of applied architecture and construction.

Employment Information

Graduates of this program can expect to find employment in many areas of the architectural and building construction fields. Each area may require somewhat different abilities and specialized knowledge and skills for a successful career.

Graduates are prepared to accept positions as architectural technicians, architectural drafters, estimators, planning technicians, inspectors, residential designers, sales representatives or any one of the many jobs within the industry requiring specialization. The U.S. Department of Labor reports that employment opportunities for engineering technicians are expected to be excellent throughout the 1990's.

Degree Awarded

Associate in Applied Science

For More Information Contact:

Kevin Burr
Department Head
Architecture Technologies
Engineering Technology Bldg.
Room 300
(405) 945-3355

Technical Occupational Specialty   28 Credit Hours

ARCH	1213	Design I	3*
ARCH	1223	Construction Drawing I	3
ARCH	1614	CAD I	4
ARCH	2003	Architecture & Society	3*
		or	
ARCH	1320	Technical Problems - Architectural Technology	3
ARCH	2013	Construction Drawing II	3
ARCH	2213	Design II	3*
ARCH	2263	Systems & Materials	3*
ARCH	2613	CAD II	3
HUMN	2103	Masterworks of Western Culture (Ancient)	3*
		or	
ART	1103	Freehand Drawing	3*

Technical Occupational Support   11 Credit Hours

GENT	2323	Statics	3*
INDT	2333	Strengths of Materials	3*
MATH	2155	Calculus II	5*

(Other courses may be substituted with departmental approval.)

Technical Occupational Related   9 Credit Hours

ENGL	1923	Masterpieces of Literature	3*
HUMN	2203	Masterworks of Western Culture (Modern)	3*
SOC	1113	Introduction to Sociology	3*

(Other courses may be substituted with departmental approval.)

General Education Courses   21 Credit Hours

ENGL	1113	Freshman Composition I	3*
ENGL	1213	Freshman Compostion II	3*
		or	
ENGL	2333	Technical Report Writing	3
HIST	1493	U.S. History Since 1865	3*
MATH	2145	Calculus I	5*
		or	
MATH	1513	College Algebra	3
		AND	
MATH	1613	Trigonometry	3
PHYS	1114	Physics I	4*
		or	
PHYS	1014	Descriptive Physics	4
POLS	1113	American Government	3*

Total to Graduate   67-69 Credit Hours

* *Refers to courses that transfers to the OSU-Stillwater's School of Architecture.*

CONSTRUCTION TECHNOLOGY —
BUILDING INSPECTION EMPHASIS

Program Description

The Construction Technology program incorporates inspection, estimation, materials, drafting and construction procedures. Graduates are employed in construction positions with engineering and architectural firms as well as city, state and federal government agencies.

Employment Information

Jobs of many types are available to the graduate of the building construction program. The primary direction of the program is toward management of construction companies, but many other careers are available such as estimators, sales representatives, drafters, system designers, expediters and many other specializations.

Degree Awarded

Associate in Applied Science

For more information Contact:

Don Welch
Interim Department Head
Architecture Technologies
Engineering Technology Bldg.
Room 300
(405) 945-3356

Technical Occupational Specialty			27 Credit Hours
ARCH	1103	Printreading	3
ARCH	1223	Construction Drawing I	3
ARCH	2263	Systems & Material	3
CONS	1123	Intro to Building Codes	3
CONS	1133	Intro to Electrical Codes	3
CONS	1143	Intro to Plumbing Codes	3
CONS	1153	Intro to Mechanical Codes	3
CONS	2213	Structural Inspection	3
CONS	2333	Construction Practices & Procedures	3

Technical Occupational Support — 9 Credit Hours
Chose nine credits with departmental approval.

Technical Occupational Related — 9 Credit Hours
Chose nine credits with departmental appoval.

General Education			19 Credit Hours
ENGL	1113	Freshman Composition I	3
ENGL	2333	Technical Report Writing	3
HIST	1483	U.S. History to 1865	3
MATH	1513	College Algebra	3
PHYS	1014	Descriptive Physics	4
POLS	1113	American Government	3

Total to Graduate — 64 Credit Hours

CONSTRUCTION TECHNOLOGY —
CONSTRUCTION MANAGEMENT EMPHASIS

Program Description

The Construction Technology program incorporates inspection, estimation, materials, drafting and construction procedures. Graduates are employed in construction positions with engineering and architectural firms as well as city, state and federal government agencies.

Employment Information

Jobs of many types are available to the graduate of the building construction program. The primary direction of the program is toward management of construction companies, but many other careers are available such as estimators, sales representatives, drafters, system designers, expediters and many other specializations.

Degree Awarded

Associate in Applied Science

For More Information Contact:

Don Welch
Interim Department Head
Architecture Technologies
Engineering Technology Bldg.
Room 300
(405) 945-3356

Technical Occupational Specialty   27 Credit Hours

ARCH	1223	Construction Drawing I	3
ARCH	2003	Architecture & Society	3*
		or	
ARCH	1320	Technical Problems-Architectural Technology	3
ARCH	2263	Systems & Materials	3
CONS	1213	Intro to Building Construction	3*
CONS	2253	Construction Drawings & CAD	3*
CONS	2333	Construction Practices & Procedures	3*
GENT	2323	Statics	3*
SPCH	1113	Intro to Speech Communications	3*

Technical Occupational Support   9 Credit Hours

CHEM	1314	General Chemistry	3*
MATH	2123	Calculus for Technology I	3*
MATH	2133	Calculus for Technology II	3*

(Other courses may be substituted with departmental approval.)

Technical Occupational Related   9 Credit Hours

HUMN	2203	Masterworks of Western Culture/Modern	3*
SOC	1113	Introduction to Sociology	3*
SOC	2023	Marriage and Family	3*

(Other courses may be substituted with departmental approval.)

General Education Courses   21 Credit Hours

ENGL	1113	Freshman Composition I	3*
ENGL	1213	Freshman Composition II	3*
		or	
ENGL	2333	Technical Report Writing	3
HIST	1483	U.S. History to 1865	3*
POLS	1113	American Government	3*
MATH	1513	College Algebra	3*
		and	
MATH	1613	Trigonometry	3*
		or	
MATH	1303	Business Math	3
PHYS	1114	General Physics	4*
		or	
PHYS	1014	Descriptive Physics	4

(Other courses may be substituted with departmental approval.)

Total to Graduate   67 Credit Hours

* *Refers to couses that transfer to the OSU Construction Management Program in Stillwater.*

COURSE DESCRIPTIONS

Accounting

ACCT 1002 BASIC ACCOUNTING PROCEDURES
A study of the basic accounting procedures. Prerequisites: One year of high school Algebra.

ACCT 1333 PERSONAL FINANCE
This course emphasizes how to develop and implement long-range plans to achieve financial objectives. This includes the basics of financial planning, money management, management of expenditures, income and asset protection, and the fundamental concepts of investments. Prerequisites: Although Business Math is recommended, the only prerequisite in this course is the sincere desire to take control of your personal financial destiny.

ACCT 2001 PAYROLL ACCOUNTING
Basic procedures of a payroll accounting system. The study of manual systems, the various laws regulating payroll data, and the preparation of the payroll tax returns. Prerequisites: ACCT 1002 or ACCT 2103.

ACCT 2041 COMPUTERIZED ACCOUNTING
Independent study, analysis, design and construction of solutions to case studies in accounting automation. Prerequisites: ACCT 2103 and CIS 1113.

ACCT 2103 FINANCIAL ACCOUNTING
Financial accounting covering the accounting process and principles of accrual accounting. The study of financial statements and the information required for their preparation. Prerequisite: MATH 1303 or Business Math or concurrent enrollment.

ACCT 2203 MANAGERIAL ACCOUNTING
Managerial accounting concepts and objectives, planning and control of sales and cost, analysis, variance analysis, capital budgeting, and the measurement of divisional performance. Prerequisites: ACCT 2103 and CIS 2250 (Lotus), concurrent enrollment, or suitable spreadsheet knowledge.

ACCT 2423 FUNDAMENTALS OF INCOME TAX
Study of the present provisions of income tax laws; preparation of tax returns. Prerequisite: ACCT 2103.

ACCT 2443 INTERMEDIATE ACCOUNTING I
Valuation and other theoretical problems in accounting for cash, temporary investments, receivables, inventories, long-term investments, plant and equipment, and intangible assets. Issues related to income determination including revenue recognition. Prerequisite: ACCT 2103.

ACCT 2533 OIL AND GAS ACCOUNTING
Accounting as it applies to the oil and gas industry. Prerequisites: ACCT 2203.

ACCT 2543 INTERMEDIATE ACCOUNTING II
A continuation of ACCT 2443. A comprehensive study of fixed assets, stockholder's equity, dilutive securities, investments, pensions, leases, error analysis, preparation and analysis of financial statements. Prerequisite: ACCT 2443.

Architecture

ARCH 1102 PRINCIPLES OF LAND USE AND DEVELOPMENT
Land use planning and its implementation through zoning and subdivision regulations. Transportation, economics, housing and utilities included.

ARCH 1103 PLAN READING
Construction drawing interpretation. Topics: organization and relationship of drawings and specs; symbols, dimensions, scales and notes. Lab three hours per week.

ARCH 1123 HISTORY OF INTERIORS AND FURNITURE
A chronological study of the history of interior design and furniture from the beginning of civilization to the present. Three hours lecture.

ARCH 1133 TEXTILES AND MATERIALS OF INTERIORS
A study of the factors involved in the selection and purchase of textile materials including identification of fibers, fabrics, weaves, yarns, colors, and finishes. Two hours lecture, two hours lab.

ARCH 1143 INTERIOR DESIGN STUDIO I
Beginning studio course exploring the anthropometric human factors behavioral response to interior space; planning, programming, and spacial concepts of residential interior space. Code applications. One hour lecture. Four hours lab.

ARCH 1213 DESIGN I
Architectural graphics and design fundamentals. Two hours lecture. Six hours lab per week.

ARCH 1223 CONSTRUCTION DRAWING I
Fundamentals of light construction drawing, techniques of architectural drawings, methods of representing plans, elevations, sections and details. General print interpretation. Lab six hours per week.

ARCH 1320 TECHNICAL PROBLEMS - ARCHITECTURAL TECHNOLOGY
1-4, max. 6 credits. Technical problems in architecture which are of particular interest to technicians. Prerequisite: Consent of the department head.

ARCH 1333 FUNDAMENTALS OF RESIDENTIAL DESIGN
Fundamentals of home design; area definition. Spatial relationships, traffic patterns with emphasis on drawing competence. Energy-use concepts as related to design. Lab six hours per week. Prerequisite: ARCH 1223.

*ARCH 1614 COMPUTER-AIDED DRAFTING I

Introduction to computer-aided drafting (CAD) principles, using a "menu-driven" system to generate graphic output for engineering drafting applications. Problem solving skills in applied technical fields will be developed. Lab four hours per week. Prerequisite or Co-requisite ARCH 1223 or equivalent. Same as INDT 1614.

ARCH 2013 CONSTRUCTION DRAWING II

Fundamentals of commercial construction drawings, preparation and interpretation of working drawings. Topics include architectural, civil and structural drawings. Lab six hours per week. Prerequisites: ARCH 1223.

ARCH 2023 SURVEY OF ENVIRONMENTAL SYSTEMS FOR INTERIORS

The study of interior lighting, electrical, HVAC, plumbing systems as they relate to interior spaces and associate with the architectural profession. Two hour lecture and lab.

ARCH 2033 PROFESSIONAL PRACTICES IN INTERIORS

A study of the professional practices and business procedures pertaining to the field of interior design. Ethics, legal requirements, marketing, and client relationships. Three hours lecture.

ARCH 2043 INTERIOR DESIGN STUDIO II

Studio experience in the design of small scale commercial and public interiors. Code applications. One hour lecture, Four hours lab.

ARCH 2044 ARCHITECTURAL PRESENTATION

Architectural presentation techniques with emphasis on two dimensional rendering styles' one, two, and multi-point perspective along with color medium and techniques. One hour lecture, four hours lab.

*ARCH 2050 CAD SPECIAL PROJECTS

Special CAD architectural project application. Instruction and practical experience of completing a major architectural CAD project. Six hours lab.

*ARCH 2063 CAD SYSTEMS MANAGEMENT

Concentrating on the responsibilities and duties of the CAD system manager including archiving and back-up procedures, file manipulation, securities, library management, graphic standards, CAD departmentalization and various applications.

ARCH 2213 DESIGN II

Continuation of ARCH 1213. Two hours lecture. Six hours lab per week.

ARCH 2263 SYSTEMS AND MATERIAL

Architectural, structural, environmental control systems and materials in architecture. Lab 2 hours.

ARCH 2322 CONSTRUCTION SPECIFICATIONS

Construction specifications and their significance as part of the contract documents. Specification language and style follows construction specification institute format. Prerequisites: ARCH 1112 or ARCH 1223 and ARCH 1313.

ARCH 2333 HOUSING AND URBAN REDEVELOPMENT TECHNOLOGY

Sociology of housing particularly in minority communities, standards and housing surveys; history and development of urban renewal in the United States. Case studies. Prerequisite: ARCH 1102.

ARCH 2343 INTERIOR DESIGN

Principles of interior design; symmetry, color and balance are coordinated to achieve environmental comfort and beauty. Lab three hours per week. Prerequisites: ARCH 1223 and ARCH 1333 or consent of the instructor.

ARCH 2433 ENERGY CONCEPTS AND APPLICATION

A study of energy concepts and their application. Solar, wind, greenhouse, and infiltration are some of the subjects. Retrofit procedures needed to apply these concepts to existing buildings are explored. Lab three hours per week. Prerequisites: ARCH 1223 and ARCH 2263 and CONS 1323 or consent of the instructor.

ARCH 2444 URBAN PLANNING TECHNOLOGY

Land use standards and zoning classifications and restrictions, nature and planning of land development patterns in the modern urban society are studied. Lab six hours per week. Prerequisites: ARCH 1223 and 2013.

*ARCH 2613 COMPUTER-AIDED DESIGN AND DRAFTING

A continuation of ARCH 1613, emphasizing integration of CADD methods and techniques in architectural design and construction drawings. Lab six hours per week. Prerequisites: ARCH 1614 or INDT 1614. Co-requisite or Prerequisite: ARCH 2013.

ARCH 2650 TECHNICAL PROJECTS - ARCHITECTURAL TECHNOLOGY

1-4, Max, 4 credits. Special project will be assigned by the advisor with the approval of the department head. A comprehensive written report of the work accomplished must be prepared and approved. Before credit is received an examination may also be required. Prerequisite: completion of three semesters work in a technical college curriculum or 36 credit hours.

ARCH 2733 ADVANCED RESIDENTIAL DESIGN

Professional design practices, actual problems with criteria including scope of design, function, practicality and marketability. Case studies. Lab six hours per week. Prerequisites: ARCH 1333 or ARCH 2013.

Art

ART 1103 DRAWING I

A freehand drawing experience designed to build basic skills and awareness of visual relationships. A sequence of problems dealing with composition, shape, volume, value, line, gesture, texture and perspective. A variety of media explored. Lab six hours per week.

ART 1203 DESIGN I

An introduction to visual problem solving. Organization of the two-dimensional plane using the elements and principles of design: line, shape, value, texture and color. Use of black and white and color media.

OKLAHOMA STATE UNIVERSITY - OKLAHOMA CITY

*CIVT 2433 CIVIL CAD DRAFTING II

Continuation of CIVT 2233. Advanced applications of civil CAD software to assigned civil or survey projects. Lab three hours per week. Prerequisite: CIVT 2233.

CIVT 2543 TRANSPORTATION AND TRAFFIC ANALYSIS

Conducting transportation and traffic analysis surveys and studies; their applications to capacities and planning. Prerequisite: CIVT 2113.

CIVT 2633 CONTRACTS AND SPECIFICATIONS

A study of standard public works specifications as to interpretation and implementation. A survey of contract documents pertaining to highway and other heavy construction.

CIVT 2650 TECHNICAL PROJECTS - CIVIL TECHNOLOGY

1-4, max. 4 credits. Special project will be assigned by the advisor with the approval of the department head. A comprehensive written report of the work accomplished must be prepared and approved before credit is received. An examination may also be required. Prerequisite: completion of three semesters work in a technical college curriculum or 36 credit hours.

CIVT 2774 STRUCTURAL ANALYSIS AND DESIGN

Elementary analysis of buildings and structures by current practical methods. Design of elements of simple structures in steel, reinforced concrete, precaseprestressed concrete, and timber. Lab three hours per week. Prerequisite: GENT 2323.

Construction

CONS 1123 INTRODUCTION TO BUILDING CODES

Introduction to current building codes including BOCA applications.

CONS 1133 INTRODUCTION TO ELECTRICAL CODES

Introduction to current electrical codes as they apply to buildings.

CONS 1143 INTRODUCTION TO PLUMBING CODES

Introduction to current plumbing codes as they apply to buildings

CONS 1153 INTRODUCTION TO MECHANICAL CODES

Introduction to current mechanical codes as they apply to buildings.

CONS 1213 INTRODUCTION TO CONSTRUCTION

Overview of the entire construction industry with emphasis on construction materials, methods, and systems. Introduction to both Building and Highway Construction Drawings and their interpretation. Two hours lecture, two hours lab.

CONS 1320 TECHNICAL PROBLEMS CONSTRUCTION

1-4, max. 6 credits. Technical problems in construction which are of particular interest to technicians. Prerequisite: Consent of the department head.

CONS 2013 CONSTRUCTION DRAWING II

Fundamentals of commercial construction drawings; preparation and interpretation of working drawings. Topics include architectural, civil, and structural drawings.

CONS 2050 ADVANCED TECHNICAL PROBLEMS CONSTRUCTION

1-6, max. 6 credits. A study of problems in applied engineering science which are of particular interest to the engineering technician.

CONS 2103 INTRODUCTION TO CONSTRUCTION MANAGEMENT

A study of organization, management, economics and labor relations pertaining to projects during the construction phase. Prerequisite: Advisors approval. Same as CIVT 2103.

CONS 2112 ELECTRICAL EQUIPMENT OF BUILDINGS

A basic course in application of electrical lighting, heating and power distribution. Topics include fundamentals of electric motor starters and controls, and basic planning and design of wiring systems. Lab two hours per week.

CONS 2113 MECHANICAL EQUIPMENT OF BUILDINGS

Plumbing, heating and air conditioning as it pertains to residence and small commercial buildings. Design and working drawings on plumbing and heating problems.

CONS 2213 STRUCTURAL INSPECTION

Orientation to the correct code requirements on applications, techniques, and inspection of reinforced concrete, structural block, and pre-stressed concrete.

*CON 2253 CONSTRUCTION DRAWINGS AND CAD

Interpretation and production of construction drawings, architectural and engineering drafting using both drafting machines and computer-aided drafting. Lab five hours per week.

CONS 2333 CONSTRUCTION PRACTICES AND PROCEDURES

Light, heavy, and industrial construction. Foundation layout, framing and finish work, site investigations, excavation, precast concrete, tilt up, structural steel and metal building construction and project management.

CONS 2342 CONSTRUCTION INSPECTION PRINCIPLES

Problems and considerations pertinent to maintaining adequate quality control on construction projects. Prerequisite: ARCH 1313.

CONS 2343 CONCRETE AND ASPHALT CONSTRUCTION

Production techniques for placing and finishing concrete. Design of concrete form work. Concrete testing techniques. Theory and techniques for placing masonry construction units, field and laboratory techniques and field procedures of asphalt construction. Lab three hours per week. Prerequisite: ARCH 1313.

CONS 2423 CONSTRUCTION ESTIMATING I

Computing the quantities and cost of materials and labor involved in residential and light commercial construction. Includes bidding procedures and computer applications. Lab two hours per week. Prerequisite: CONS 1323 and ARCH 1223.

CONS 2623 CONSTRUCTION ESTIMATING II

A continuation of Construction Estimating I, with emphasis on detailed quantities of materials and labor of building construction estimates. Topics include the preparation of an estimate, and bidding procedures. Prerequisite: CONS 2423.

CONS 2650 TECHNICAL PROJECTS

1-4, max. 4 credits. Special project will be assigned by the advisor with the approval of the department head. A comprehensive written report of the work accomplished must be prepared and approved. Before credit is received, an examination may also be required. Prerequisite: Completion of three semesters work in a technical college curriculum or 36 credit hours.

Economics

ECON 2013 INTRODUCTION TO MACROECONOMICS

A study of the functioning and current problems of the aggregate economy; determination and analysis of rational income, employment, inflation and stabilization monetary and fiscal policy and aspects of international interdependence.

ECON 2023 INTRODUCTION TO MICROECONOMICS

A study of the functioning of the price system; the analysis of market structures; the issues of government policy, the public sector and the market economy; the understanding of resource markets; and an examination of international economic interdependence.

Energy/ Environmental Resources Management

EERM 1113 INTRODUCTION TO ENVIRONMENTAL SCIENCE

This course will provide an introduction to Environmental Science. It treats Environmental Science as an interdisciplinary study, combining ideas and information from natural sciences (such as Biology, Chemistry and Geology) and so-

cial sciences (such as Economics, Politics and Ethics) to present a general idea of how nature works and how things are interconnected. This study of connections in nature examines how the environment is being used and abused, and what individuals can do to protect and improve it for themselves, for future generations and for other living things.

EERM 1123 INTRODUCTION TO ENERGY/ENVIRONMENTAL MANAGEMENT

This course is a technical overview of the history, terminology, and environmental impact issues associated with the petroleum industry. This course helps students prepare for the registered environmental manager exam. Prerequisite: EERM 1813, EERM 2423.

EERM 1223 INTRODUCTORY ENVIRONMENTAL POLICY

This course provides new information on the government regulations and policies required for industries.

EERM 1320 TECHNICAL PROBLEMS - ENERGY & ENVIRONMENTAL

Technology problems associated with the Energy and Environmental area. Prerequisite: Consent of Department Head.

EERM 1423 INTRODUCTION TO SOCIAL ENVIRONMENTAL ECOLOGY

This course studies the background of environmental issues and will allow the student to understand how these issues are impacting today's environmental issues.

EERM 1563 PROPERTY EVALUATION

This course examines the impact of an environmental audit on the acquisition and development of oil and gas properties. Prerequisite: MATH 1513

EERM 1663 BASIC OIL AND GAS LAW

This course is a study of oil and gas law as it applies to lease administration, gas balancing, environmental audits, property acquisitions, division orders, and joint operating agreements.

EERM 1723 REGULATORY PRACTICES

This course is a study of governmental regulations as they apply to permits, drilling, production activities and environ-

mental impact issues. Prerequisite: EERM 1123, EERM 1663 or Department Head Approval.

EERM 1813 ENVIRONMENTAL LAW

A study of environmental laws, statutory rules, regulations, and compliance's as they apply to industry.

EERM 2223 ENVIRONMENTAL POLICY STUDY II

Issues that effect environmental policy are continuing to change at a rapid rate. This course will help the student understand and do research on issues relating to environmental law.

EERM 2253 INTRODUCTION TO PETROLEUM GEOLOGY

This course will cover petroleum geology fundamentals and the environmental impact issues as they apply. Lab two hours per week. Prerequisites: GEOL 1114, GEOL 1224 or Department Head approval.

EERM 2313 INTRODUCTORY ENVIRONMENTAL CHEMISTRY

A study of environmental chemistry involving hazardous waste and pollutants as they affect the ecological systems associated with the hydrologic cycles, biosphere, and soils.

EERM 2323 ENVIRONMENTAL SITE ASSESSMENTS

This course prepare the students in the activities required for industries to meet federal compliance standards. Focusing on site assessments and environmental impact studies on construction, remodeling, and manufacturing.

EERM 2413 ENVIRONMENTAL PERMITTING

This course helps the students to understand the processes involved and the government forms that must be completed to obtain a permit to assure environmental compliance.

EERM 2423 ENVIRONMENTAL AUDITING AND COMPLIANCE

This course prepares the student to understand the laws, statutes and regulations that are involved in performing and documenting the Environmental Audit. Students are prepared to take the Certified Environmental Auditor Exam upon completion of this course.

APPENDIX E

WRITTEN RECOMMENDATIONS

PROPOSAL

FOR

THE POTENTIAL ENHANCEMENT

OF THE CITY OF GUTHRIE OKLAHOMA

DOWNTOWN AREA

Presented by:

OKLAHOMA STATE UNIVERSITY-OKLAHOMA CITY

ARCHITECTURE DEPARTMENT

JULY 25, 1996

The following are recommendations captured through research and design by the Oklahoma State University-OKC architecture department that might enhance the overall environment of the downtown business district of historic Guthrie Oklahoma:

* Establish, through zoning or other measures, an architectural standard that reflects the evident historic values of the downtown business area.

    1.   Preserve the historic architectural theme.

        a)   Remove any superficial ornamentation that does not comply with the theme. This includes but is not limited to:

            1. Signages.

            2. Exterior applications not original in theme or nature.

    2.   Maintain a standard for all exterior awnings for store fronts in style and color.

* Put all overhead wires underground.

* Restore the original brick paver roadways in the affected areas of the presentation.

* Incorporate either a horse drawn or electric trolley system as indicated by the model presentation.

* Block off, as indicated by the model presentation, the applicable streets to only pedestrian traffic.

* Create planters, visitor stations including drinking fountains and restroom accommodations, benches, and other applicable amenities conducive to pedestrian affiliation to downtown shopping area.

* Encourage tourism to the downtown area and incorporate the following criteria:

1. Encourage business development in the downtown area to be applicable to the theme of tourism.

2. Encourage those businesses who are not applicable to a tourism theme to relocate to another commercial location conducive commercialism.

3. Promote entertainment businesses to the downtown area conducive to the historic theme and current attractions.

4. Seek hotel accommodations to the downtown area. Possibly recreating past historical building facades to accomplish this recommendation.

5. Encourage the incorporation of the health and fitness business and possibly recreate a rendition of the historic Bath House to facilitate some of this recommendation.

6. Utilize the upper levels of most of the existing historic buildings in the area to incorporate a "Bread and Breakfast" atmosphere thus enhancing the area to historic tourism.

7. Promote the antique railroad loop route that would stop at the historic station in Guthrie.

8. Promote the historical aspects of the community.

* Relocate the existing fire station out of the original downtown area to a more effective location and create either a historic firehouse museum or a trolley station out of the existing structure.

* Construct parking structures that conform to the historic architectural theme vicinty of the pedestrian areas that will assist in the parking of visitor and tourist automobiles.

APPENDIX F

MODEL DISPLAY
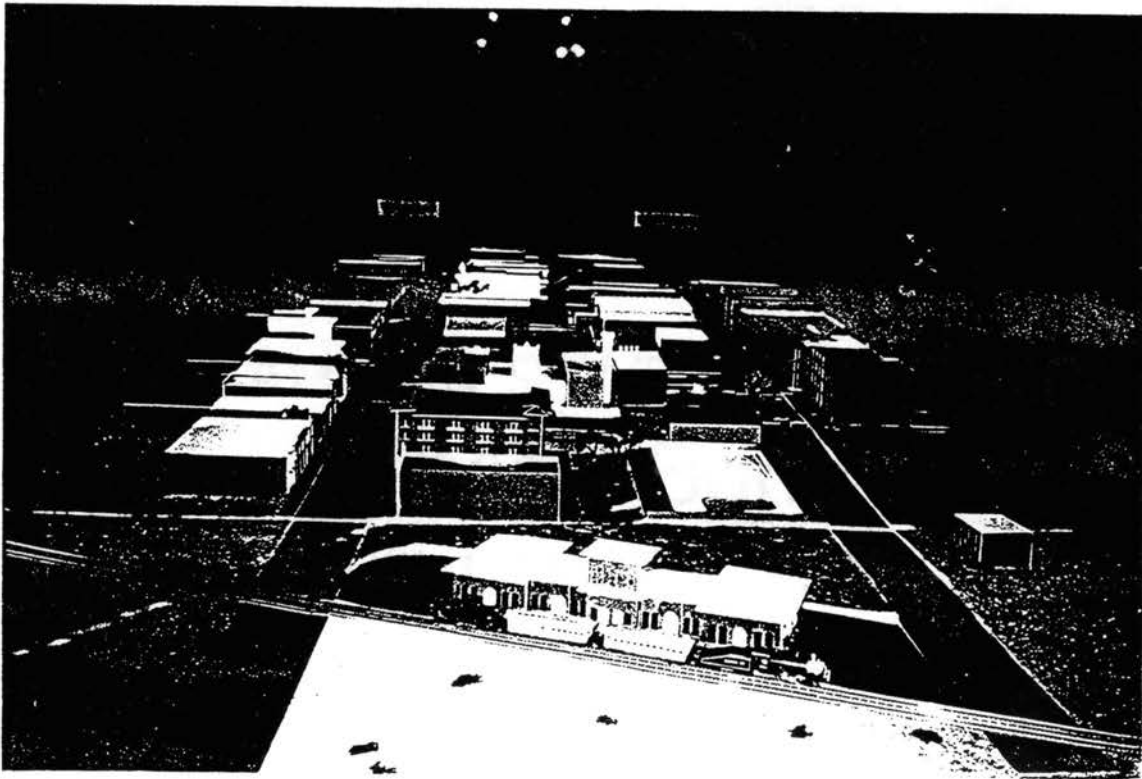
VITA

Kevin L. Burr

Candidate for the Degree of

Doctor of Education

Thesis: PROBLEMS, POLITICS, AND POSSIBILITIES OF A PROGRESSIVE
          APPROACH TO SERVICE LEARNING IN A COMMUNITY COLLEGE: A
          CASE STUDY

Biographical Data:

   Personal Data: Born in Price, Utah, June 15, 1955, the son of George Thomas and
        Phyllis Burr. Married Brenda Hulse, January 27, 1978. Four children,
        Brandon, Brady, Brooks, and Bethany.

   Education: Graduated from Green River High School, Green River, Utah, May
        1973; received Associate of Science degree in Architectural Technology
        from Brigham Young University , April, 1982; received Bachelor of
        Science degree in Vocational Education from the University of Nevada, Las
        Vegas, May, 1988; received Master of Education in Education from the
        University of Nevada, Las Vegas, August, 1991; completed requirements
        for the Doctor of Education degree in Occupational and Adult Education
        from Oklahoma State University in Stillwater, Oklahoma, December, 1997.

   Professional Experience: Professional Project Architect from June 1982 to July
        1986; Department Chair and Professor of Architecture at the Community
        College of Southern Nevada from July 1986 to July 1994; Department head
        of Architecture and Division head of engineering at Oklahoma State
        University-Oklahoma City from August 1994 to May 1997; Associate Dean
        for Enhanced Technology for Southwest Missouri State University-West
        Plains from May 1997 to the present.