TECHNOLOGY INTEGRATION IN VOCATIONAL PROGRAMS AT OKLAHOMA SKILLS CENTER SCHOOL SYSTEMS

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CHAPTER I

INTRODUCTION

Crime and dealing with criminals was one of society's most costly and controversial issues. A major trend under consideration by researchers was the incredible increase of incarcerations rates in the United States (Chaiken, 2000). According to the Bureau of Justice Statistics (1996), in 1980, there were nearly 319,000 inmates in the United States. Between 1980 and 1989, the prison population doubled to 683,000. By 1996, the population increased to over 1.1 million men and women incarcerated in state and federal prisons in the United States.

Since 1980, the Oklahoma Department of Corrections (ODOC) had grown from an agency having a system count of 4,250 offenders to a system inmate count in 1999 that exceeds 21,500 offenders (ODOC, 1999) and a total cost of incarceration in excess of 343 million dollars (ODOC, 1999). Ninety-eight percent of Oklahoma's inmates might return to our local communities, some habilitated, some rehabilitated,

and others without any desire to conform to the laws of our society.

Recidivism

Recidivism had averaged 26.68% over a three year period for Oklahoma Department of Corrections (1998). Considering the success rates of Oklahoma's ex-offenders and a recent Department of Labor projection that indicated there might be 5.5 million fewer 18-24 year olds by the year 2000 than in 1990, Oklahoma might not be able to afford to waste the potential labor of ex-offenders (Jacques, 1991). Employers will have less of a luxury in picking employees from a relatively large pool of applicants. Chief Justice Warren Burger (1984) provided a logical but very powerful analysis of the current situation:

> It is predictable that a person confined in a penal institution for two, five or ten years, and then released, yet still unable to read, write, spell or do simple arithmetic and not trained in any marketable vocational skill, will be vulnerable to returning to a life of crime. And very often the return to crime begins within weeks after release. What job opportunities are there for an unskilled, functional illiterate who had a criminal record? We do not need the help of behavioral scientists to understand that human beings who are taught to produce useful goods for the marketplace, and to be productive, are more likely to develop the self-esteem essential to a normal, integrated personality. This kind of program would provide training in skills and work habits, and replace

> the sense of hopelessness that is the common lot of prison inmates. The choice is ours, and the cost of doing something new will be less than the cost of continuing the old patterns. (pp. 77-78).

Studies in the states of Maryland, Illinois, and Oklahoma produced findings that indicated at least a moderate negative correlation between completion of a vocational education program and recidivism (Jenkins & Mumford, 1989; Oklahoma Department of Vocational & Technical Education, 1990; Schumacker, Anderson & Anderson, 1990). The Schumacker et al. study categorized ex-prisoners into one of four groups: (1) vocational students; (2) vocational/academic students; (3) academic students; and (4) the control group. Using a proportional random sampling procedure to select and equate inmate groups, ex-prisoners were selected during a three-month period and then tracked the following 12 months. After the 12-month tracking period, the vocational and vocational/academic groups had the highest employment rates, lowest combined unemployment rate, and lower criminal activity rates.

Ryan and Mauldin (1995) performed an exhaustive review of articles on prison education and recidivism. Of 97 articles, 85% reported that participation in a prison education program had an impact on reducing recidivism of

released offenders. Nonetheless, despite the evidence that clearly documented the effectiveness of correctional education, funds for correctional education have remained low on the priority list.

Oklahoma Skills Center School Systems

Vocational education for incarcerated populations in Oklahoma began in 1971 with the establishment of the Ouachita Vocational-Technical Skills Center located near Hodgen, Oklahoma. Since then, training and services had expanded to include 26 separate vocational training programs in 14 different correctional facilities (See Appendix A).

Skill center school systems located in Oklahoma's correctional facilities have prepared students for the same jobs as area vocational-technical schools. The success of Oklahoma's area vocational-technical school system had been well-documented (Dauffenbach & Polonchek, 1990; Perry, 1989; Peters, R., 1987; Peters, T., 1987; Sellers & Michells, 1990). However, Friedemann (1991) was concerned with whether or not the training received by the inmates would measure up to the same standards as the area vocational-technical schools.

According to Friedemann (1991), vocational-technical schools had always had a great deal of credibility with many key publics including the legislature (those who appropriate state dollars), the local constituency (those who approve local taxes) and with industry (the consumers of their product). If research could document that the training provided in skill centers was equivalent to that which was provided by the area vocational-technical school districts, then a positive step could be taken toward increasing the level of advocacy for adequate funding of vocational education in correctional institutions. According to Reffett (1983), such gap bridging efforts were necessary to provide credibility for correctional school systems.

Friedemann (1991) addressed the apparent lack of advocacy for quality vocational education programs for incarcerated populations. He suggested that inferior educational technologies existed in the OSCSSs when compared to the public vocational-technical system.

Technology and its Changing Face

Instructional technology was generally defined as "the application of scientific and other organized knowledge to practical tasks by organizations consisting of people and

machines" (Daniel, 1999). Technology, and more specifically instructional technologies, had changed since the Friedemann study was conducted in 1991. Since that time, instructional technologies had improved. For example, with regard to computers, a 286 processor with 4 megabytes (MB) of Random Access Memory (RAM) was standard for that day. The compact disk (CD) Read Only Memory (ROM) was not standard in Personal Computers (PC), and the Internet lacked the speed and versatility that it offered today in conjunction with far advanced processors and megabytes of RAM that might exceed the capacity of some hard drives in 1991.

Considering today's plethora of advanced technology, such as DVD; high-speed computers and Internet connections; CD-ROM; satellite; and software, it was "inherent" that employers would expect technologically sound employees (Lankard, 1994). Lankard researched employer's expectations, and found that in addition to job performance skills, communication skills, and interpersonal skills, young people preparing for jobs in an economy of high technology must have a good working knowledge of computers to be able to be productive in most occupational areas.

Statement of the Problem

A two-fold problem had been associated with correctional vocational education, employer attitudes and level of technology used in training. In the past, employers showed a great deal of reluctance to hire ex-offenders for fear they were faulty products who had received outdated training on obsolete equipment from an unqualified faculty (Jacques, 1988). However, recent efforts such as those imposed by the Ohio Department of Rehabilitation and Correction (ODRC) were supporting the hiring of ex-offenders (ODRC, 1997). Through the "Offender Job Linkage Program", private sector employers were encouraged to participate in job fairs at state prisons. This initiative began in 1991, and in 1997 the ODRC reported private sector employers had positive experiences employing ex-offenders.

The National Institute of Corrections, the U.S. Department of Justice, the Office of Correctional Education, and the U.S. Department of Education had established and supported "Project Re-Enterprise (PRE)." PRE enlisted the participation of local business leaders in an educational initiative to hone the job-seeking skills of inmates. In the

process of helping incarcerates, PRE offered employers the chance to provide a public service, to learn about an untapped source of potential workers, and to broaden their perceptions of criminals and the correctional community. However, the remaining problem of training offenders using obsolete equipment might continue to exist (Moses, 1996). Friedemann (1991) explored this problem when he studied Oklahoma Skill Center School Systems (OSCSS).

The question existed as to whether OSCSSs were utilizing the instructional technologies that existed. It might be the case that OSCSSs were fully utilizing current technologies, it might be the case that OSCSSs did not have access to current technologies, or it might be the case that OSCSSs had access to current technologies but were not utilizing them to the fullest extent.

Purpose of the Study

The purpose of this study was to describe the state and usage of instructional technology in Oklahoma's Skills Center School Systems. Data provided by this study might be used to determine the level of advocacy for quality vocational education programs for the incarcerated populations of Oklahoma's minimum/medium security prisons.

Research Questions

The major questions developed to provide guidance to the study were:

1. What types and how much instructional technology existed in the Oklahoma's Skills Center School Systems?

2. How did instructors utilize available instructional technology for instruction?

3. What were instructors' perceptions of how learners utilized available instructional technologies for learning?

Assumptions

1. Instructors were able to make an accurate estimation of level of accessability, the degree to which the instructors utilized instructional technologies, and the degree to which students' utilized instructional technology in the Oklahoma's Skills Center School Systems (OSCSSs). Since the data was based on instructor perceptions rather than on more objective data, the assumption was that the instructors accurately perceived and accurately reported this information.

Limitations

This study had the following limitation:

1. The results of this study were specific to Oklahoma's Skills Centers School Systems (OSCSSs). Only Oklahoma Skills Center School Systems were used to conduct the study, and because other programs in other states might be somewhat different than the Oklahoma programs, it might be more difficult to generalize to other states.

2. The OSCSS inventory was based on instructors' perceptions of inventory rather than on "real" inventory. Despite several earnest efforts, obtaining an "official" OSCSS inventory of instructional technologies proved to be unsuccessful.

Outcomes

Using the information gathered while conducting this research, the researcher determined the current state of instructional technology, whether OSCSSs had access to instructional technologies and whether instructors and students were utilizing these instructional technologies. If OSCSSs did not have access to current instructional technologies, then greater advocacy for OSCSSs would be

recommended. If OSCSSs had access to current instructional technologies but were not capable of utilizing those instructional technologies, the greater technology support and training would be recommended.

Because no other study had examined the current state of technology in correctional skill centers, this study might serve as baseline data for planning and assessment for Oklahoma and for other states and countries. In addition the study might serve as evidence of a need for more funding for OSCSS instructors and students.

Definition of Key Terms

The following definitions were operationally used in this study.

Crime: An act committed or omitted in violation of a law forbidding or commanding it for which there were penalties (Dictionary of Criminal Justice Data Terminology, 1981, pp. 60-62).

Ex-Offender: An ex-offender is a person who had been released from a correctional facility following the completion of his/her sentence.

Habilitation: Habilitation is the development of a new capacity.

Instructor: An instructor was an individual who was engaged in providing educational programs and services to incarcerated populations.

Maximum Security Facility: A correctional facility with a secure external perimeter that was either walled or double fenced. Armed tower officers observe the perimeter 24 hours per day. Any person entering the perimeter was subject to a strip search. Inmate counts were conducted every four to five hours. No SCSSs existed in these facilities (Oklahoma Department of Corrections Policy and Operations Manual, 1990, pp. 1 & 3).

Medium Security Facility: A correctional facility with a secure external perimeter that was either walled or double-fenced. Armed tower officers observe the perimeter 24 hours per day. (Oklahoma Department of Corrections Policy and Operations Manual, 1990, p. 2).

Minimum Security Facility: A correctional facility with a clearly defined perimeter but with no tower or fences. An external patrol was used to observe the perimeter on an intermittent basis (Oklahoma Department of Corrections Policy and Operations Manual, 1990, p. 2).

Parole: The status of an offender conditionally released from a prison by discretion of a paroling authority

prior to expiration of a sentence (Dictionary of Criminal Justice Data Terminology, 1981, p. 144).

Prison: A prison was a facility designed to house individuals who have been convicted of a criminal offense. Prison, Penal Institution and Correctional Facility were used interchangeably (Dictionary of Criminal Justice Data Terminology, 1981, p. 149).

Prisoner: A prisoner was a person kept under involuntary restraint, confinement or custody as a result of having been convicted of a criminal offense. Prisoners, Inmates, Offenders, Criminals, and Incarcerated Populations were all used interchangeably.

Recidivism: The repetition of criminal behavior. The Bureau of Justice Statistics (April, 1989, p. 2) listed three measures of recidivism; re-arrest, reconviction, and re-incarceration. The Bureau concluded that re-arrest was the most reliably reported measure of recidivism because using only reported convictions would understate the true recidivism rates due to the fact that not all offenders who were prosecuted to go to trial.

Rehabilitation: The restoration of a former capacity.

Skills Center School Systems: Vocational-technical skills centers were schools operated by the Oklahoma

Department of Vocational and Technical Education and were designed to serve the vocational educational needs of incarcerated populations in minimum and medium security prisons.

Organization of the Study

Chapter I introduced the study and presented the problem, purpose, objectives, research questions, assumptions, limitations, and definitions used in the study. Chapter II provided a review of related literature regarding the history of corrections and current trends for application of technology to habilitate or rehabilitate inmates. Chapter III presented the research procedural method used in the study. Chapter IV reported the findings of this study. Chapter V offered the conclusions and recommendations related to the results of the study.

CHAPTER II

REVIEW OF LITERATURE

Introduction

The review of literature focused on: (a) the history of correctional education; (b) the changing philosophy of prisons (corrections); and (c) the application of instructional technology in correctional institutions.

History of Correctional Education

Correctional education as a separate professional discipline was a relatively new concept with origins tracing back to the late 1800s. The genesis of correctional education could be traced to the days when reform was the dominant philosophy of corrections. The purpose of educating prisoners was for salvation and moral regeneration as evidenced in the early part of the 18th century when the Pennsylvania Quakers centered their prison system around the goal of reconstructing the criminal through penitence. As a result, early

correctional education focused primarily on Bible study and reflection in solitude (Ryan, 1976).

In the last half of the 19th century the philosophy evolved toward a more complex view of what caused crime. The concept of the offender as an immoral sinner who was simply in need of religious instruction expanded to take on a more complex view. The cause for criminal activity was thought to have been possibly due to intellectual, psychological, or vocational deficiencies (Seashore, 1976). New York led the way to incorporating education into corrections when, in 1847, it passed a state law requiring two instructors for each state prison (cited in Werner, 1990).

In 1867, Wines and Dwight undertook the first systematic look at the country's prison reform movement by surveying nearly all the prisons that existed and issued their landmark Report on the Prisons and Reformatories of the United States and Canada (Werner, 1990). That report cited the Detroit House of Correction as the model prison in the United States. The superintendent of that prison was Zebulon Brockway who would become one of the great innovators in early correctional education. In 1876, Brockway became the warden of New York's newly opened prison in Elmira and immediately developed instructional programs in vocational education and academic

> undereducated persons wherever they may be found, we recognize that our penal population constitutes a proper field for educational effort. In brief, we are not ready to make its efficacy in turning men from crime the only criterion in judging the value of education for prisoners. (p. 3)

From that point on, correctional education expanded rapidly and by 1948, MacCormick commented that the situation had drastically improved since his 1927-28 study.

In 1946, the Correctional Education Association was organized for professionals employed in providing education and related services to incarcerated populations and began publishing The Journal of Correctional Education. That effort provided the finishing touches on the establishment of a professional identity for correctional educators and served as a national voice and advocacy for the estimated 23,000 people who were involved nation-wide in correctional education (Werner, 1990).

Recent Philosophical Changes

Despite the initial philosophy of corrections to reform through salvation and later education, the 1970s witnessed a change in focus as well as a significant increase in support for correctional education. Whereas the earlier efforts in correctional education focused primarily on teaching inmates

to read and write, the 1970s conceptualized education of inmates in a very broad, holistic sense (Ryan, 1995).

In 1982, the United States Bureau of Prisons established a mandatory 90-day literacy education for all federal prisoners functioning at less than sixth grade achievement level (McCollum, 1989). In 1983, the Bureau policy was amended to require eighth grade achievement and amended again in 1991, calling for a high school diploma or its equivalent as the basic literacy standard. In addition the required enrollment period was raised from 90 days to 120 days (McCollum, 1992). However, the prison population had exploded and was expected to continue to increase at an astounding rate (Bureau of Justice Statistics, 1994). Thus, resources that could potentially be used for correctional education were instead being used for building, upgrading, and maintaining prisons.

Federal funding increased for the purpose of training prisoners through the Adult Education Act of 1969. The Act funded large-scale national programs of adult basic education and career education in correctional institutions (Southern Lincs Consortium, 2000). Prior to 2000 a.d., the prison literacy program had been receiving almost $5 million annually under the Adult Education Act. However, changes were made to

the Adult Education Act of 1969. For example, the Southern Lincs Consortium (SLC) reported that the Workforce Investment Act repealed the prison literacy program. States had been required to apply a minimum 10% of their Adult Education State Grant toward corrections education programs. However, under the Workforce Investment Act, states might use a maximum of 10% toward this purpose (Souther Lincs Consortium, 2000).

Impact of Instructional Technology on Student Achievement

One of the key questions with educational technology was whether or not the technology actually contributed to student learning. Since the first uses of educational radio and television, hundreds of studies had tried to assess the instructional effectiveness of new technologies marketed to schools. Learning effectiveness, in these studies, had most often been defined in terms of traditional measures of student achievement, such as test scores and final grades (Means, 1993).

Casey (1992) proposed that a variety of advantages were associated with the use of instructional technology when dealing with at-risk youth. He stated that when using technology, covert learning could and did take place without the normal resistance to overt educational approaches.

Moreover, they represented multi-sensory approaches to learning using visual, auditory, and kinesthetic learning modalities. Individualized learning could set realistic goals, and encouraged retrial of failures without group embarrassment.

Means (1993) focused on the context of the learning. He concentrated not on the technology itself, but on how technology fit with all of the other aspects of the classroom with which students must contend. Mean examined factors that could affect the individual learner, including the design of the lesson, peer interaction, and learning style. Thus, he examined relationships among multiple factors in the classroom. The study showed positive gains in student learning when combinations of teaching media and various methods of instruction were considered.

The Rehabilitation Debate

As the decade of the 1970s approached its end, there was a dramatic change in the philosophy of corrections (Ryan, 1995). The "nothing works" indictment promulgated by Martinson (1974) spawned a barrage of critical attacks on the concept of offender rehabilitation. The end result was a new philosophy of corrections, espousing the causes of punishment,

retribution, and incapacitation. There was little support for correctional education under the punitive philosophy dominating United States corrections in the 1980s. In essence, the rehabilitation model was abandoned.

Hamm (1987) suggested that the rehabilitative ideal had diminished since the mid-1970s and credited much of that movement to the publication of Robert Martinson's work in 1974 which eventually "led a legion of analysts from all political persuasions to accept that nothing works in corrections" (p.8).

Martinson (1974) and his colleagues were hired in 1966 by the New York State Governor's Special Committee on Criminal Offenders and asked to conduct a comprehensive survey of what was known about rehabilitation. The Governor, because of his concern that the prisons in his state were not making a serious effort at rehabilitation, organized the Committee. After examining 231 studies focusing on rehabilitation attempts from 1945 through 1967, Martinson (1974) concluded the following: "With few and isolated exceptions, the rehabilitative efforts that have been reported so far have had no appreciable effect on recidivism" (p.25). Martinson's finding served as a catalyst for dialogue and debate among criminologist and correctional educators and was probably one

of the most recognized works regarding that subject.

According to Ryan (1995), the problem was that research intended to test the rehabilitation model was poorly developed. Martinson relied solely on recidivism as a measure of success. MacCormick (1931) cautioned against the use of recidivism as the only criterion for judging the value of education for prisoners. Sandel (1990) stated similarly, "I do not think it is reasonable in many cases to use recidivism as a measure of success or failure of adult correctional programs (p. 11)." Shover (1979) felt that recidivism was not the only measure of effectiveness and suggested other measures might include changes in attitudes, values, career aspirations, work habits, personality characteristics, disciplinary record, abstinence from substance abuse, and amount of earnings after release from imprisonment. Martinson (1974) even admitted to other such measurements of success in his report but selected only recidivism as his yardstick, because he felt it reflected most directly how well treatment programs were performing the task of rehabilitation.

There were others who were quick to point out that while nothing appeared to work relative to rehabilitation it was probably due to a number of other variables that had not been addressed by the treatment program. Werner (1990) suggested

that the term rehabilitation was a misnomer in that someone who had not been habilitated to begin with could not be rehabilitated. Samenow (1984) concurred and felt treatment programs, to be successful in many cases, had to focus on establishing patterns of thinking that were totally foreign to the offender. Both authors felt moral change was a critical ingredient of the rehabilitative and/or habilitative process and the Martinson study appeared to point treatment programs in that direction.

Palmer (1975) warned about using the Martinson study as the "death knell" for the field of correctional intervention. He felt the pessimism expressed by many criminologists at the time was unwarranted based on Martinson's findings. Palmer (1975) went on to submit that Martinson's often-quoted concluding remarks were focused on the question of whether any methods of treatment were of value for nearly all offenders thereby concluding that there were no sure ways of reducing recidivism for offenders as a whole. In supporting his case, Palmer (1975) cited numerous situations in the Martinson study where successes were found, but because Martinson applied the criterion of inconsistency in a rigorous manner to each case study, few were seen as being successful, even though the

treatment might have been shown to be effective for some offenders.

As a result, Palmer (1975) proposed what he felt might have been a more appropriate conclusion to the Martinson study:

> Rather than ask, what works for offenders as a whole, we must increasingly ask which methods work best for which types of offenders, and under what conditions or in what types of setting. (p. 150)

Samenow (1984) offered a similar view by acknowledging, that while no one knew for sure what the percentage was, there were those who "given the right kind of assistance and treatment, will never commit another crime" (p. 194). Gendreau and Ross (1979) provided a more scientific counter to those who were quick to accept Martinson's findings as absolute truth:

> The eagerness with which researchers have accepted the null hypothesis that correctional treatment has no beneficial effect goes against the grain of all we have learned about research methodology. The study of human behavior and the modification of that behavior is barely in its infancy. It is perhaps the least advanced and the most imprecise of the sciences and yet we talk with such certainty. It is a puzzle to us to understand how social scientists think they have obtained a completely satisfactory and final answer to an extremely complex question. (p. 5)

Keve (1981) indicated similar feelings and viewed the Martinson study more as a mandate for better research in correctional treatment.

Martinson's (1974) study appeared to raise more questions than it answered. While the controversy surrounding his findings still continued, many correctional educators and criminologists gave him credit for heightening the awareness for problems associated with past rehabilitation/habilitation efforts. That, in turn, led to more discussion and research related to the proper posturing of treatment programs in correctional institutions.

Education as an Effective Treatment

Martinson's (1974) study had a significant impact on the field of correctional education as a form of treatment. If nothing worked, then Department of Corrections officials were faced with the probability that they must reprioritize their efforts and/or redefine their mission. The debate over the role and purpose of corrections resulted in education programs being relegated to prison "baby-sitting" to assist in combating inmate idleness rather than for post-release success (Coffey, 1986). Coffey, another critic of the Martinson findings, felt the "nothing works" conclusion was misquoted and that many of the research reports studied by Martinson in the education-training area were not scientifically valid which made them virtually meaningless.

Holloway and Moke (1987) noted that the Martinson study found four possible reasons why academic attainment had no effect on recidivism:

> First, that educational programs were irrelevant to life outside prison; secondly, that most such programs used obsolete equipment and techniques; thirdly, that such programs could not reverse the adverse impact of incarceration; and finally, that educational attainment was often completely irrelevant to the reasons for an offender's criminal lifestyle. (p. 42)

Those observations were supported more heartily by correctional educators and of the four, the issue of obsolete equipment and techniques was cited by many as being the most frequent cause for failure in treatment programs involving vocational education (Braithwaite, 1980; Graham, 1982; Keve, 1981; & Stirling, 1974). Braithwaite (1980) went on to note that "vocational programs can have an effect on recidivism, but often they do not" (p. 54) and suggested that a fifth reason might be job placement programs that were unable to place ex-prisoners in training-related employment because employers sneered at qualifications gained in prison.

McMurlyn (1987) found that participation in vocational training programs in South Dakota prisons had no positive influence on the variables of recidivism, employment status, and work characteristics and recommended that corrections officials should either abolish the existing vocational-

technical programs or conduct a major curriculum evaluation in an effort to make those programs more effective.

It would appear that education suffered from many of the same misfortunes as the other treatment programs. Effectiveness had been very difficult to determine. While some programs boasted success, others experienced only marginal results or failure. The literature suggested that more and better research was needed to provide clarity relative to the viability of educational programs in correctional settings. Importantly, instructional technology had been recognized as a factor contributing to the effectiveness of vocational programs in correctional institutions.

The Correctional Education Environment

The setting for correctional education had always been a unique educational challenge because of the unconventional environment in which it operated on a daily basis. A.S. Baxendale, Director of Prison Education for England and Wales, in a 1985 interview with Gehring (1989), stated that "correctional education is the struggle to provide educational services in coercive institutions" (p. 167). Stirling (1974) expounded that "philosophically, education and the penal

system make peculiar bed-fellows" (p. 142). Duguid (1990) described the marriage of education with incarceration as "fraught with both conflict and potential" (p. 113) where liberation and empowerment opportunities inevitably clash with restrictive and dependency-producing forces. Roush (1983) and Corcoran (1985) both cited internal as well as external problems associated with this dilemma. Internal factors included prison officials who viewed education as another form of control, opposition from guards who resented inmates for receiving costly education, and inmates who were using education programs as a way to beat the system with no real desire to habilitate or rehabilitate. External factors included politicians who were inclined to support such programs but were reluctant to do so for fear of appearing to be soft on hardened criminals by their constituents. In addition, Maley (1985) found that while a significant majority, 75 percent, of the country's chief penal administrators viewed themselves as being rehabilitation-oriented, they thought the people in their states were punishment-oriented. O'Neil (1990) suggested all of these factors served to polarize the two administrative fields and prevented the advancement of educational goals in a prison environment.

Stirling (1974) argued that prison officials did not truly support educational programs because they had more important priorities.

> Education obviously does not rank high in the priorities of the Department, and one might well feel moved to ask why it should. The raison d'etre of the penal system is, by definition, punitive, deterrent and custodial. It must be more concerned with protecting the public from its menaces than in educating them, especially as its 'clients' are already failures of the educative system. A little bit more of what you do not fancy is not likely to do you good. (p. 143)

Coffey (1986) noted that such an attitude, which had resulted in the closing of educational programs in two states, found both programs later reinstated by the courts within two years. Unfortunately, in both situations, prison officials viewed the programs more as a way to combat idleness rather than produce post-release success which relegated the classes to a "kind of occupational therapy, even baby-sitting" (p.2).

Rothman (1980) proposed that if student learning was not priority, then learning was reduced to an accidental by-product. To address the by-product syndrome, Gehring (1989) proposed a principle with six corollaries:

> Principle: Schools must be places where student learning is the priority, and educators must make student learning the focus of their professional lives.
> Corollary 1: Correctional education is the struggle to provide educational services in coercive institutions.
> Corollary 2: "Good old boys" are correctional educators who do not prioritize student learning.

> Corollary 3: Educators should make educational decisions. Corollary 4: In correctional education, the traditional 'knowledge, skills and attitudes' priority formula should be reversed - 'attitudes, skills, and knowledge.' Corollary 5: Prison reformers and correctional educators share a common goal - to transform prisons into schools. Corollary 6: Correctional educators help to develop better citizens, instead of better inmates. (p. 168)

Another obstacle that prohibited quality correctional education was a negative attitude by the general public. Reffett (1983) explained that a lack of public support translated into a lack of adequate funding for prison schools. Reffett (1983) rationalized why there was a noticeable absence of advocacy for prison education:

> Unlike the public schools, the prison school is a program without a clarified, supportive constituency. There are no citizen support groups, no parent committees, no school board, no alumni association, and no Parent-Teacher Associations to provide the much-needed impetus for correctional education. (p. 41)

Hamilton (cited in Friedemann, 1991) further supported this problem by asserting that state legislatures, reflecting the attitude of their constituents, had historically been hesitant to support the funding of prison education programs.

The Offender as a Student

Coffey (1986) gave a general profile of the typical offender and his or her need for educational programs. Such qualities as poor, unskilled, undereducated, and unemployed

frequently described the typical offender. In fact, according to Coffey, only 40 percent, when compared to 85 percent of the U.S. population as a whole, had completed high school. Most inmates functioned on the fifth-grade level in reading and spelling and somewhat lower in math. Forty percent were reportedly unemployed at the time of arrest; an additional 12 percent had only part-time employment. Estimates indicated that about 25 percent of the prison population suffered from some form of learning disability or other handicapping conditions. One-third had a record of severe alcohol abuse, and one-third had a record of drug abuse.

Werner (1990) had a similar description of the typical inmate. However, he also recognized that the average inmate was a member of an ethnic minority group, between the age of 21 and 33, from a single and/or divorced-parent household, had another member of the family who had also been incarcerated, knew other people who had been in prison, was a victim of child abuse, and had an early history of trouble with the law. Others argued that offenders were essentially undeveloped human beings who had not acquired the discipline, education, and training to be able to function in society (Shover & Einstadter, 1979). Fox (1977) also noted that offenders and ex-offenders were not known for good work habits.

In stressing the importance of education as a deterrent to criminal activity, Hodgkinson (1990) pointed out that states that had the best rate of high school graduation tended to have the lowest rates of prisoners per 1,000 population. Praeger (1990) indicated that one of the greatest obstacles to addressing the educational needs of the offender was dispelling the myth that there was a genetic predisposition to do poorly in school, both academically and behaviorally. However, Janowitz (1972) proposed that "no matter how anti-social an inmate's behavior had been, it was chiefly a product of social and psychological factors and not merely a personal malevolence and deviltry" (p. 648). Werner (1990) supported Janowitz's position by arguing demographic background played a large role in a person's social or anti-social behavior.

Cross (1977) presented a discussion on barriers to adult learning that centered on a 1974 national survey conducted for the Commission on Non-traditional Study. Obstacles to learning for typical adults were categorized by situational, institutional, and dispositional barriers. Of the three, dispositional barriers presented the greatest challenge for correctional educators.

Knowles, (1973) reiterated the following assumptions about adults as learners: (1) they must have a need to know;

(2) they have a need to be self-directing; (3) they have a greater volume and quality of experience; (4) there must exist a readiness to learn; and (5) their orientation to learning was life-centered, task-centered, or problem-centered.

The Oklahoma Department of Vocational and Technical Education (1990) asked inmates their reason(s) for participating in the learning process. The largest number of offenders stated that they had hoped to gain an education to learn a trade that would enable them to be successful when they were released.

The desire of offenders to gain an education or to learn a trade was not an unsubstantiated concept. Rather, it was a concept that resulted in lower rates of recidivism (Jenkins & Mumford, 1989; Oklahoma Department of Vocational & Technical Education, 1990; Schumacker, Anderson & Anderson, 1990). In fact, it led to higher employment rates, lower combined unemployment rate, and lower criminal activity rates, all of which contributed to lower recidivism rates (Schumacker et al., 1990).

Federal Legislation

Carl D. Perkins Vocational Education Act of 1984 (PL 98-25)

The Department of Education's Office of Vocational and Adult Education (OVAE) administered the Perkins Act. Under the Perkins Act, one percent of the Act's federal funds were made available to help provide vocational-technical education programs and services to youth and adults. The vast majority of funds appropriated under the Perkins Act were awarded as grants to state education agencies. These State Basic Grants were allotted to states according to a formula based on states' populations in certain age groups and their per capita income (Moore, 1999).

The Federal Carl D. Perkins Vocational and Applied Technology Education Act of 1990 (PL 101-392)

The Federal Carl D. Perkins Vocational and Applied Technology Education Act of 1990 (PL 101-392) stipulated that at least one percent of the one percent set aside for vocational education must be spent for correctional education. (Office of Vocational and Adult Education, 2000)

Carl D. Perkins Vocational and Applied Technology Education Act Amendments of 1998 (PL 105-332)

Signed into law on October 31, 1998, the Carl D. Perkins Vocational and Applied Technology Education Act Amendments of 1998 (Perkins III) set out a new vision of vocational and technical education for the 21st century. The Act required states to set aside no more than one percent of its basic state grant funds for correctional education. Furthermore, the monies included distribution to the mentally or physically challenged population in state institutions (Office of Vocational and Adult Education, 2000B). At the end of fiscal year 2000, Oklahoma Skills Center School Systems faced the loss of $800,000 in federal funding. This was a loss of approximately 1.2 million dollars in the last few years, and a complete cutoff of federal funding for correctional education (Garrison, 1999).

Summary

Correctional education as a separate professional discipline was a relatively new concept with origins tracing back to the late 1800s. While beliefs about habilitating and/or rehabilitating inmates had been a vacillating issue

since the 1800s, one trend was certain, federal funding for correctional education was currently in a state of decline. Inmates remained in need of habilitation and rehabilitation via education, more specifically vocational education. However, a decrease in funding for these programs put greater and greater burdens on the states to support correctional education, which might ultimately result in little or no correctional education available to our minimum and medium security prison inmates. Ultimately, the consequences might be realized by our society at large.

CHAPTER III

METHOD

The purpose of this study was to describe the current state and usage of instructional technologies that existed in Oklahoma Skills Center School Systems (OSCSS).

Presented in this chapter are the methods and procedures followed in conducting the study. The following items are detailed: (a) research design; (b) population; (c) subjects; (d) instrumentation; (e) data collection; and (f) analysis of data.

Research Design

This study had both quantitative and qualitative research elements. The quantitative portion of the scale was used to gather data to answer the research questions. The qualitative portion included open-ended questions. The qualitative portion was used to help analyze the quantitative responses.

Preliminary Arrangements

The researcher contacted the Superintendent of the OSCSSs and requested access to the directors of the skill centers, and access was granted. Following the initial discussion with the Superintendent, the researcher visited a skill center located in the southeastern part of Oklahoma. The purpose of this visit was to get a first-hand look at a skill center before embarking on the research project. There existed five instructional coordinators who were responsible for coordinating the educational processes for the fourteen Oklahoma Skills Center School Systems (OSCSS). Because the instructional coordinators had direct access to the instructors at their respective sites, the decision was made that OSCSS instructional coordinators would distribute the survey instrument to the instructors.

Preparation of Data

To prepare data for analysis, the data was entered into a Microsoft Excel[RN] spreadsheet. Using formulas available in Microsoft Excel[RN], descriptive statistics such as means and frequencies were calculated.

Population

The population for this study consisted of all Oklahoma Skills Center School System (OSCSS) instructors (N = 42) in Oklahoma's minimum and medium correctional facilities during the winter of 1999. Oklahoma Skills Center school systems did not exist in maximum-security prisons. The web site for the Oklahoma State Department of Vocational-Technical education provided the instructor population information (i.e., http://www.okvotech.org/scss/oscss.htm).

Subjects

Five instructional coordinators served as laisons for the 14 Oklahoma Skills Center School System (OSCSS). Four of the instructors worked with three OSCSSs each and one worked with two OSCSSs. The instructional coordinators who chose to participate, distributed the survey to the appropriate instructors. The instructors were clearly given the option to be a non-participant. Thus, the twenty-one participants who chose to complete the survey consisted of instructors working at the 20 skills centers located in Oklahoma correctional facilities. To ensure confidentiality and to identify respondents and non-respondents, the OSCSSs and programs were assigned a code number.

Instrumentation

The data were collected through a mailed survey. The researcher developed a Resource Usage Scale (RUS) to answer the questions relative to the current study (Appendix B). According to Key (1994), a good survey:

a. dealt with a significant topic;

b. sought information which could not be obtained from other sources;

c. was lengthy enough to get the essential data;

d. was attractive in appearance and neatly arranged;

e. had clear and complete directions

f. defined important terms;

f. contained objective questions, with no leading suggestions as to the response desired;

g. presented questions in good psychological order, proceeding from general to more specific responses.

h. avoided annoying or embarrassing questions; and

h. was easy to tabulate and interpret.

The RUS was designed to determine: (1) which and how much instructional technologies existed in the Oklahoma Skills Center School Systems (OSCSSs), (2)how instructors utilized instructional technology for instruction, and (3)

what were instructors' perceptions of how learners utilized instructional technologies for learning.

The survey consisted of 29 items that asked instructors to indicate how often and the manner in which they and/or their students used each instructional technology as a tool in the courses that they taught. Also, the survey asked instructors to report their perception of the impact of instructional technologies on learning and curriculum. A four-point Likert-type rating scale was used that assessed the level, manner, and impact of usage for each resource with the following: 1=Disagree; 2=Somewhat Disagree; 3=Somewhat Agree; and 4=Agree. Categorical Usage was determined by summing the appropriate responses to the resources utilized in the Skill Centers. Percentages, frequencies, and means were obtained for each item. Additionally, three open-ended questions were included to elicit instructional technology needs and their potential impact if filled. Finally, a section addressing demographic characteristics was included to produce an instructor profile and identify which vocational programs they taught.

A panel of experts consisting of two instructional technology experts and a research methodology expert critiqued the RUS to establish content validity and to

ensure the RUS was well-structured. Content validity in an instrument meant the measure, on the surface, appeared to elicit the information the researcher intended to elicit (Aronson, Ellsworth, Carlsmith, & Gonzalez, 1990). Thus, the content validity of the survey relied on the issue of whether the questions on the survey determined instructional technology usage.

Pilot test

The instrument was pilot tested by public vocational-technical teachers who taught the same programs as those offered by the skills center school system. The results of the pilot test revealed the approximate amount of time to complete the survey was 20 minutes. The questions and rating scale were judged to be clear and unambiguous.

The pilot test was subjected to Cronbach's alpha, a measure of internal consistency/reliability. Cronbach's alpha was generally used for measures where subjects responded to questions on a scale (e.g., 1 to 3, 1 to 4, 1 to 5) and might have a value that ranged between 0 and 1. If a scale had an alpha of above .60, it was usually considered to be internally consistent (Garrett, 1966). The pilot test revealed a Cronbach's alpha of .95.

Data Collection

Survey Administration

Each instructional coordinator was provided a packet for each of their instructors. The packet for each instructor contained a cover letter (Appendix C) that explained the scope, rational, and procedure for the research. Furthermore, the packet included the Resource Usage Survey (Appendix B) and two consent forms for each instructor (Appendix D). One was to be returned to the researcher, and one was for the instructor participant. A letter of support from the OSCSS Superintendent (Appendix E), and a self-addressed, stamped envelope were the final elements of the packet.

Survey Collection

The surveys were coded to identify non-respondents. To increase participation, the researcher e-mailed the instructional coordinators approximately two weeks after the initial mailing (Appendix F). Two weeks after e-mailing the instructional coordinators, the researcher e-mailed the instructors who had not responded (Appendix G). Twenty-One instructors (50.00%) participated in the study.

Analysis of Data

Following data collection, the researcher entered the data into a digital database management system. To ensure confidentiality, the researcher password protected the data files.

Means, percentages, and frequencies were used to analyze the quantitative data. In addition to each quantitative part of the questionnaire, instructors had the opportunity to make comments. These comments were used in a qualitative fashion to further expound upon the descriptive responses. To analyze the qualitative responses, the data were categorized into similar and unique answers to indicate trends. Categorical summations were conducted to determine strength of simular and unique responses.

Reliability

Cronbach's alpha was calculated to determine the reliability of the instrument. According to Cronbach (1944, p. 59), tests scores were at least somewhat inaccurate because errors could make their way into individuals test scores. Errors in measurement might result in a misleading representation of the subjects "true" score. Thus, the reliability of an instrument showed the extent to which

errors of measurement influenced the individuals scores or values. According to Garrett (1966), if a scale has an alpha of above .60, it was usually considered to be internally consistent. The reliability of the Resource Usage Scale developed for this study was (r=.89).

Chapter IV

FINDINGS

Response Rate

The data for the study were obtained by requesting survey completion from 42 vocational technology instructors from Oklahoma Skills Center School Systems (OSCSS), representing 26 vocational programs, located at 14 different sites. Usable instructor responses totaled 21, from 13 vocational programs, located at 7 different sites; resulting in an instructor response rate of 50.00% (Table I).

TABLE I

POPULATIONS AND PERCENTAGES OF OSCSSs, PROGRAMS, AND INSTRUCTORS WHO PARTICIPATED

Type	Population	Response Rate	Percentage
Instructors	42	21	50%
Programs	26	13	50%
OSCSS sites	14	7	50%

Instructor Profile

The instructor profile was determined across the categories of (1) experience in the field, (2) teaching experience, (3) vocational-technical teaching experience, and (4) teaching experience at OSCSSs. The following findings were revealed by the data.

Table II on page 49 shows the specific data related to the teacher profiles. The mean number of years of experience in the field was 20.33, ranging from four to thirty-five years of experience. The mean number of years of teaching experience was 9.10 years, ranging from one to twenty-two years of experience. The mean number of years of vocational teaching experience was 7.48 years, ranging from one to twenty-two years of experience. Lastly, the mean number of years of teaching experience at OSCSSs was 6.70, ranging from one to fifteen years of experience.

Table III on page 50 revealed the frequencies of years of experience by category. Only two of the instructors (9.52%) had less than 10 years of experience in the field, and 15 instructors (71.43%) had 16 or more years of experience.

TABLE II

INSTRUCTOR DEMOGRAPHICAL DATA

Participant	Yrs Exp in the Field	Yrs Exp Teaching Public ed	Yrs Exp Teaching Vo-Tech	Yrs Exp Teaching at OSCSS
1	21	3	3	3
2	25	4	4	4
3	24	4	4	4
4	30	10	5	5
5	24	4	4	4
6	35	15	15	15
7	14	1	1	1
8	33	3	3	3
9	28	12	8	8
0	20	5	5	5
11	20	13	2	3
12	17	2	2	-
13	15	6	6	6
14	4	10	10	4
15	30	16	16	11
16	8	11	11	11
17	17	17	3	3
18	11	12	12	12
19	13	8	8	8
20	18	22	22	11
21	20	13	13	13
Mean Yrs Exp	20.33	9.10	7.48	6.70

TABLE III

CATEGORIES AND FREQUENCIES FOR YEARS OF EXPERIENCE

Years of Experience	In the Field	Teaching (General)	Teaching Vocational Education	Teaching at OSCSS
0-5	1	7	8	9
6-10	1	3	5	6
11-15	4	7	4	4
16-20	6	4	3	1
21-25	4	-	-	-
26-30	3	-	-	-
31-35	2	-	-	-
No Response	0	0	1	1

Seven of the instructors (33.33%) had 0-5 years of teaching experience. Eleven of the instructors (52.38%) had 11 or more years of teaching experience, and three instructors (14.29%) had 6-10 years of teaching experience. Eight of the instructors (40.00%) had 0-5 years of vocational-technical teaching experience. The data revealed 5 instructors (25.00%) who had 6-10 years of vo-tech experience, 4 instructors (20.00%) had 11-15 years of vo-tech experience, and 3 instructors (15.00%) had 16-20 years of vocational-technical teaching experience. The mean number of years of teaching experience was 7.48 years.

The distribution for teaching experience at OSCSSs was similar to the teaching experience in vocational-technical education programs. Nine instructors (45.00%) had 0-5 years of OSCSS teaching experience, 6 instructors (30.00%) had 6-10 years of OSCSS teaching experience, 4 instructors (20.00%) had 11-15 years of OSCSS teaching experience, and 1 instructor (5.00%) had 16-20 years of OSCSS teaching experience

Instructor Educational Level

The educational level of the instructors is revealed in Table IV on page 52. The highest level of education for

eight of the instructors (40%) was high school. For another 8 of the instructors (40%), the highest level of education was a Bachelor's degree. However, 12 of the instructors (60%) had an associate, bachelor or higher degree. Two instructors (10%) had an associate's degree, and two instructors (10%) had a master's degree.

In summary OSCSS instructors had a great deal of field experience, were generally well-educated, had little teaching experience, and had even less vocational teaching experience. Thus, the typical instructor had good field experience and showed that he/she was capable of learning.

TABLE IV

LEVEL OF EDUCATION OF INSTRUCTORS

Degree	Frequency	Percentage
High School (or GED)	8	40.00
Associate	2	10.00
Bachelor	8	40.00
Master	2	10.00
No Response	1	5.00

Vocational Programs

Table V on page 53 depicts the various vocational programs taught by the instructors. Some instructors taught

TABLE V

VOCATIONAL PROGRAMS TAUGHT BY INSTRUCTOR PARTICIPANTS

Program	Instructors*
Building Maintenance Technology	5
Construction Technology	4
Air Conditioning & Refrigeration	4
Major Appliance Repair	3
Masonry	3
Commercial Building & Grounds Maintenance	3
Educational Enhancement	2
Electricity Technology	2
Automotive Service Technology	2
Building and Home Services	1
Transmission Repair	1
Plumbing	1
Power Products Technology	1
Total	**32**

* Respondents may have indicated more than one program.

more than one vocational program. Thirteen of the 26 OSCSS programs (50%) were represented in the data. Because instructors could indicate that they taught more than one vocational-technical program, 32 responses to programs taught were indicated in all.

Program responses included 5 (15.63%) for Building Maintenance and Technology; 4 (12.50%) for Air Conditioning and Refrigeration, 4 (12.50%) for Construction Technology, 3 (9.38%) for Major Appliance Repair, 3 (9.38%) for Masonry, 3 (9.38%) for Commercial Building and Grounds Maintenance, 2 (6.25%) for Educational Enhancement, 2 (6.25%) for Electricity Technology, 2 (6.25%) for Automotive Service Technology, 1 (3.13%) for Building and Home Services, 1 (3.13%) for Transmission Repair, 1 (3.13%) for Plumbing, and 1 (3.13%) for Power Products Technology.

Research Question One

No formal or informal technology or instructional technology inventory existed at the OSCSSs. Efforts to obtain existing inventory lists of instructional technologies proved to be unavailable. The survey did contain questions related to current OSCSS inventory. Thus, the survey was used to infer the current state of

instructional technologies that existed in OSCSSs and answer research question one, "What types and how much instructional technology existed in the OSCSS?".

Types, Quantity, and Level of Instructional Technologies

Table VI on page 56 reveals the types of computer software and audio/visual instructional technologies that existed in the OSCSSs. The most frequent type of instructional technology reported was word-processing software. Nineteen instructors (90.48%) reported that they used word-processing software. Video Cassette Recorders (VCRs) had the second highest report of usage at 18 users (85.71%). The only other instructional technology utilized by greater than 50% of the instructors was spreadsheet software, which was used by 12 users (57.14%). Thus, computers and VCRs were the most common types of instructional technologies that existed in OSCSSs. Other instructional technology responses included 8 (38.10%) for use of audio tapes, 8 (38.10%) for computer use of PowerPoint, 6 (28.57%) for use of simulation software, 6 (28.57%) for use of slide projectors, and 1 (4.76) for use of Digital Video Disc.

TABLE VI

TYPES OF COMPUTER
SOFTWARE AND AUDIO/VISUAL
INSTRUCTIONAL TECHNOLOGIES

Instructional Technology	**Frequency of users**	**Percentage of users**
Word Processor	19	90.48
Video Cassette Recorder	18	85.71
Spreadsheet	12	57.14
Audio Tapes	8	38.10
Powerpoint	8	38.10
Simulation Software	6	28.57
Slide Projector	6	28.57
Overhead Projector*	4	19.05
"Other" Instructional Technologies		
E-mail	2	9.52
Film-Strip Projector	2	9.52
ShopWare	1	4.76
Electronics NIDA	1	4.76
Digital Video Disc	1	4.76

Instructional technologies reported in the "Other" category included 4 (19.05%) for use of overhead projectors, 2 (9.52%) for use of e-mail, 2 (9.52%) for use of film-strip projectors, 1 (4.76%) for use of ShopWare software, and 1 (4.76%) for use of Electronics NIDA software.

Needed Instructional Technologies

The survey asked instructors to list needed instructional technologies. The list of needed instructional technologies and other related comments which indicated a need for particular instructional technologies were used to infer items that were perceived by instructors to be non-existent or not available.

Table VII on pages 58 and 59 indicates eight (32.00%) of the 25 responses to instructional technological needs were computer-related needs (e.g., newer computers, more computers in the classroom); 16 (64.00%) of the responses related to needed instructional technologies were either computer-related or required the use of a computer (e.g., digital camera, scanner, PowerPoint). Furthermore, 10 of the 12 needed instructional technologies (83.33%) were computer-related, required the use of a computer, or were

TABLE VII CONTINUED

NEEDED
INSTRUCTIONAL TECHNOLOGIES AND THEIR USES

*IT	Frequency of Response	Response Percentage	Requires Computer	Projection Related	Use(s)
Digital Video Disc	1	4.00	No	Yes	Training(1)
Laserdisc	1	4.00	No	Yes	Training(1)
CD Player	1	4.00	No	No	None Given
Internet Access	1	4.00	Yes	No	Further Education (1) Job Search (1)
PowerPoint	1	4.00	Yes	Yes	Demonstrations(1), Instructions(1), Training(1)
Trans. Shift Box	1	4.00	No	No	

TABLE VII

NEEDED
INSTRUCTIONAL TECHNOLOGIES AND THEIR USES

Instructional Technology	Response Freq.	Response Percentage	Requires Computer	Projection Related	Use(s)
Newer Computers	5	20.00	Yes	No	Develop Lesson Plans(1), Troubleshooting techniques(1), CD training modules(1)
Digital Camera	4	16.00	Yes	Yes	Pictures: Student Portfolios(1), Take Pictures(1)
LCD Projector	4	16.00	No	Yes	Lesson Presentations(3)
More Classroom Computers	3	12.00	Yes	No	Self-Paced and Performance-Based Education(1), For students' use(1), Simulate training on CD(1)
Scanner	2	8.00	Yes	No	None Given
Video Camera	1	4.00	No	Yes	None Given

compatible with a computer. The laserdisc and transmission shift box were the two "other" needed technologies.

The other major need identified by instructors was for projection-related hardware or software (see Table VII, pp. 57-58). Of the 25 responses, 12 (48.00%) of the responses were projection-related. Thus, the two major needs indicated by instructors were (1) computer hardware- or software-related and (2) video capture- or projection-related.

Proposed uses for the needed instructional technologies included developing lesson plans, recordkeeping, test generation, portfolio pictures, and presentations. No specific uses for scanners were listed.

Instructor/Student Access

Table VIII on page 61 indicates that 13 (66.67%) of the instructors agreed or somewhat agreed that they have less access to instructional technology than they would like; 13 (61.90%) agreed or somewhat agreed that they used their personal instructional technologies; 17 of the instructors (80.95%) agreed or somewhat agreed to having adequate skills and knowledge for using the instructional technologies available to them. Only one instructor (4.76%) somewhat

TABLE VIII

INSTRUCTOR/STUDENT
INSTRUCTIONAL TECHNOLOGY DIMENSIONS:
SKILLS, TRAINING, SUPPORT, ACCESS, AND USAGE

	Numbers and Percentages				
Question	A	SA	SD	D	Item #
Instructor has adequate IT* skills	n=14 66.66	n=3 14.29	n=4 19.05	n=0 0.00	4
Adequate instructor training	n=11 57.14	n=8 38.10	n=0 0.00	n=2 4.76	5
Adequate instructor support	n=9 45.00	n=7 35.00	n=3 15.00	n=1 5.00	6
Instructors have less access to IT than desired	n=8 42.86	n=5 23.81	n=2 9.52	n=5 23.81	2
Students have access to IT	n=7 33.33	n=7 33.33	n=4 19.05	n=3 14.29	7
Students have necessary skills to use IT	n=7 33.33	n=8 42.86	n=3 14.29	n=2 9.52	8
I use my own personal IT	n=5 23.80	n=8 38.10	n=4 19.05	n=4 19.05	3
Students use IT to complete assignment or facilitate learning	n=8 38.10	n=7 33.33	n=1 4.76	n=5 23.81	14
Do not use IT	n=0 0.00	n=1 4.76	n=1 4.76	n=19 90.48	1

* Instructional Technologies
A - Agree
SA - Somewhat Agree
SD - Somewhat Disagree
D - Disagree

agreed with the statement "I do not use any form of instructional technology."

Fourteen (66.66%) of the instructors agreed or somewhat agreed that students have access to instructional technologies, and 16 (76.19%) agreed or somewhat agreed that the students had the necessary skills to use the instructional technologies available to them. However, instructor comments indicated that students acquired the skills necessary to use the instructional technologies during class (Appendix H).

Instructor Training and Support

While instructors reported less access to technologies than desired, 16 (80.00%) agreed or somewhat agreed to having access to technical support, 20 (95.24%) agreed or somewhat agreed that they have training opportunities to develop the technical skills required for use of available instructional technologies. In fact, only one instructor somewhat disagreed with the statement "I have adequate skills and knowledge for using the instructional technologies available to me." The same instructor disagreed with the statement "I have training opportunities to develop the technical skills required for use of

instructional technology." Thus, virtually all of the instructors reported using some instructional technologies.

The vast majority of instructors believed they had adequate instructional technology skills, instructional technology training, and instructional technology support. However, two-thirds believed they had less access to instructional technologies than they desired, almost two-thirds believed students had less access to instructional technologies than desired, and most instructors utilized their personal instructional technologies. Access to instructional technologies does not necessarily indicate usage. Thus, the research instrument focused also on how instructors utilized instructional technologies for instruction.

Research Question Two

Table IX on page 64 reveals instructor usage of computer-related instructional technologies that existed in the OSCSSs. Instructor responses were used to answer research question two, "How do instructors utilize instructional technology for instruction?"

TABLE IX

INSTRUCTOR USE OF INSTRUCTIONAL TECHNOLOGIES

	Numbers and Percentages				
Purpose	A	SA	SD	D	Item #
Use CA* for preparation	n=13 61.91	n=6 28.57	n=1 4.76	n=1 4.76	10
Use CA to gather & create instructional materials	n=12 57.14	n=5 23.81	n=3 14.29	n=1 4.76	11
Use CA for actual instruction	n=8 38.10	n=4 19.05	n=3 14.29	n=6 28.56	12
Use CA to demonstrate concepts	n=3 14.29	n=4 19.05	n=5 23.81	n=9 42.85	13

*Computer Applications

Instructor Use

Nineteen (90.48%) instructors agreed or somewhat agreed that they use computer applications for instructional preparation, and 17 (80.95%) agreed or somewhat agreed that they utilized computer technologies to gather and create instructional materials. Twelve (57.15%) instructors agreed or somewhat agreed that they actually used computer applications in the classroom for instruction, and 7 instructors (33.34%) indicated that they used computer applications to demonstrate concepts.

The comments related to usage included those that were characterized as "instructional", such as tests, assignments, handouts, presentations, etc.. A second category of usage comments was "recordkeeping," such as inventory, memos, requisitions, budgets, etc.. The third category of comments was "communication outside of class," such as notes and correspondence (see Appendix I).

Of the 62 listed uses, 43 (69.36%) were instructional-related, 15 (24.19%) involved professional responsibilities, and 4 (6.45%) involved communication outside of class.

Content Covered

Audio/Visual

Fifteen instructors (75.00%) agreed or somewhat agreed that the use of audio/visual instructional technologies affected the depth of content covered in the program, and 15 instructors (75.00%) agreed or somewhat agreed that the use of audio/visual instructional technologies affected the breadth of content covered (see Table X, p 67). One instructor commented that the use of video cassette recorders allowed "demonstration of large outside projects." Other comments included, "Covers key points," "Interaction is encouraged and encountered with video and lab sessions," and "Give the students new ideas and confidence." (see Appendix J).

Computer Applications

Thirteen instructors (65.00%) agreed or somewhat agreed that the use of computer applications affected the depth of content covered in the program, and 10 instructors (55.55%) agreed or somewhat agreed that the use of computer applications affected the breadth of content covered.

TABLE X

EFFECTS OF INSTRUCTIONAL
TECHNOLOGIES ON CONTENT COVERED

	Numbers and Percentages				
Purpose	A	SA	SD	D	Item #
Does Audio/Video affect the depth of content covered	n=10 50.00	n=5 25.00	n=3 15.00	n=2 10.00	16
Does Audio/Video affect breadth of content covered	n=9 45.00	n=6 30.00	n=3 15.00	n=2 10.00	16
Does CA affect depth of content covered	n=9 45.00	n=4 20.00	n=5 25.00	n=2 10.00	15
Does CA affect breadth of content covered	n=6 33.33	n=4 22.22	n=6 33.33	n=2 11.12	15

Comments were made regarding student interaction and student performance as effects of use of computer applications. Instructors made such comments as the use of computer applications "Broadens know-how," "Students will often consult another student before asking instructor," and "Keeps them interested" (see Appendix K).

Research Question Three

Reiterating that more than three-fourths of instructors agreed or somewhat agreed that the students had the necessary skills to use the instructional technologies available to them, the questions existed "What are instructors perceptions of how students utilized instructional technologies for learning?" Table XI on page 69 summarizes the survey responses of this third research question.

Impact on Students

Sixteen instructors (80.00%) agreed or somewhat agreed that the use of instructional technologies apparently impacted the students' motivation to learn. Comments related to students use of instructional technologies indicated that students were fascinated with technology and

TABLE XI

STUDENT USE OF COMPUTER AND AUDIO/VISUAL INSTRUCTIONAL TECHNOLOGIES

	Numbers and Percentages				
Purpose	A	SA	SD	D	Item #
Use of IT has Impacted Students' Motivation to Learn	n=11 55.00	n=5 25.00	n=1 5.00	n=3 15.00	9
Affect on Student Participation Using A/V IT	n=8 40.00	n=6 30.00	n=3 15.00	n=3 15.00	16
Affect on Student Performance Using A/V IT	n=8 40.00	n=8 40.00	n=1 5.00	n=3 15.00	16
Students Use IT to Complete Assignments	n=8 38.10	n=7 33.33	n=1 4.76	n=5 23.81	14
Affect on Student Performance Using CA	n=8 38.10	n=6 28.57	n=2 9.52	n=5 23.81	15
Affect on Student Participation Using CA	n=6 30.00	n=6 30.00	n=4 20.00	n=4 20.00	15
Student/Student Interaction Using A/V IT	n=4 21.05	n=7 36.84	n=3 15.79	n=5 26.32	16
Student/Student Interaction Using CA	n=4 21.05	n=4 21.05	n=6 31.58	n=5 26.32	15

that the use of instructional technologies kept them motivated (see Appendix H).

Fourteen (70.00%) of the instructors agreed or somewhat agreed that the use of audio/visual instructional technologies had an affect on student participation; 16 instructors (80.00%)agreed or somewhat agreed that the use of audio visual technologies had an affect on students' performance; and 15 (71.43%) instructors agreed or somewhat agreed that students use instructional technologies to complete assignments.

Student Performance and Participation

Instructors' reported perceptions indicated that student performance and participation were enhanced as a result of the use of computer instructional technologies although to a lesser degree than with the use of audio/visual instructional technologies. Fourteen instructors (66.67%) indicated that the use of computer instructional technologies had an effect on student performance; and 12 instructors (60.00%) indicated that the use of computer instructional technologies had an effect on student participation. For example, one instructor stated

that use of audio/visual instructional technologies gave "students new ideas and confidence." (see Appendix J)

Student Interaction

Instructors believed that student interaction was affected by the use of computer and audio/visual instructional technologies. Eleven instructors (57.89%) indicated that the use of audio/visual instructional technologies affected student/student interaction, and 8 instructors (42.10%) indicated that the use of computer instructional technologies affected student/student interaction. Interestingly, one comment suggested that the use of instructional technologies facilitated interactions between students whereby a student might help another student learn to use the instructional technology (see Appendix H).

Summary of Findings

Analysis of the data revealed the following:

1. Instructors agreed or somewhat agreed that the instructional technologies to which they had access was less than they would like. The problems seemed to lie in both a lack of instructional technologies and a lack of up-to-date

instructional technologies. The majority of these needs were directly computer-related (i.e., hardware and software)and projection-related.

2. Instructors agreed or somewhat agreed that they felt capable of using the instructional technologies available to them. Furthermore, instructors reported adequate technical support and training.

3. Instructors reported a need for more instructional technologies for students, and they believed students were capable of using existing technologies, as a result of "in-class" learning.

4. Computer applications were used frequently for preparation of class materials and for actual implementation of class curricula. Furthermore, instructors tended to believe that the use of computers and audio/visual aids affected the depth and breadth of content covered, although audio/visual aids had a greater effect than computer applications.

5. Comments indicated that the use of instructional technologies in the classroom enhanced student motivation participation and performance, including the facilitation of peer to peer assistance with the use of instructional technologies.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to describe the current state and usage of instructional technologies that existed in Oklahoma Skills Center School Systems (OSCSS). There were three specific research questions for the study: (1) What types and how much instructional technology existed in OSCSSs?, (2) How did instructors utilize available instructional technology for instruction?, and (3) What were instructors' perceptions of how learners utilized available instructional technologies for learning?

The population for the study consisted of the 42 Skill Center School System instructors in Oklahoma's minimum and medium correctional facilities during the winter of 1999.

The survey and follow-up e-mails resulted in a 50% return rate of 21 responses from 7 (50)% of the 14 OSCSSs. The respondents represented programs in seven OSCSSs.

Descriptive analysis was used to determine the state of instructional technology and the usage of instructional technology by students and instructors in OSCSSs.

Conclusions

While the results of this study identified some positive trends among instructors regarding instructional technology access, ability, and availability of support and training for use of instructional technologies, and impact of instructional technologies on student learning and interaction, the study also produced some results that indicated a need for newer and more instructional technologies to be made available to instructors. Due to the nature of the population, the findings can only be stated for OSCSSs. As a result of the data, the following conclusions are drawn:

Based on the observable data from this study:

1. Instructors had less access to instructional technology than they would have liked, and instructors often used their own instructional technologies. It is concluded that the instructors seem to be capable of using instructional technologies but that the state of instructional technology in OSCSSs apparently is in need of enhancement.

2. Most instructors needed instructional technologies that were computer-related or projection-related. It is concluded that the state of instructional technology appears

to be lacking especially in access to computer software/hardware and projection hardware.

3. Instructors reported that they had adequate skills and knowledge for using the current instructional technologies, they had access to training opportunities, and they had access to technical support. It is concluded that OSCSSs and the Oklahoma Department of Vocational-Technical Education (ODVTE) have taken the appropriate and effective measures for ensuring that instructors have a well-balanced support system for the use of the existing instructional technologies.

4. Instructors perceived that students needed more access to instructional technologies and were capable of utilizing the those instructional technologies. Thus, it is concluded that more instructional technologies appear to be needed for students in the classroom.

5. Instructors perceived the use of instructional technology to have had a positive impact on the students' motivation to learn, to participate, and to perform. Furthermore, instrucotr comments suggested a positive impact on student interaction as a result of the use of instructional technologies. It is concluded that the use of

instructional technologies may play an important role in enhancing learning for OSCSS students.

6. Instructor educational levels were high, work experience was high, teaching experience was good, and most had been a student in higher education. It is concluded that the instructors at OSCSSs are an educated group of people and are capable of learning.

7. Instructors perceived student interaction with each other and with the instructors to learn instructional technologies. It is concluded that students seemed to gain those instructional technological skills during the courses.

8. A good cross-section of OSCSS programs were represented in the study. It is concluded that the study well-represented OSCSSs.

9. Oklahoma Skills Center School Systems (OSCSS) appear to have more audio/visual types of instructional technologies. It is concluded that instructors perceived audio/visual instructional technologies had a greater effect on depth and breadth of content covered.

Generally it is concluded that instructors were capable and willing to utilize instructional technologies in curriculum preparation and implementation since they seemed to either have access to OSCSS instructional technologies or

utilized their own instructional technologies in their classes. Moreover, OSCSSs and the State Department of Vocational-Technical Education have provided good support and training for instructors. Unfortunately, it appears that the instructors' lacked the very same instructional technologies in which they were trained, supported, capable, and willing to use.

Recommendations for Future Research

This study has provided information concerning the types of instructional technologies that existed in OSCSSs, how instructor utilized instructional technology for instruction, and instructors' perceptions of how learners utilized instructional technology for learning. The information provided by this study may serve as baseline data. It provided answers to the questions raised by the researcher. The following are recommendations for further research.

1. Conduct an experimental study regarding the impact of instructional technologies on student participation, performance, and interaction.

2. Conduct a study to determine learning outcomes based on levels of usage of instructional technologies.

3. Conduct a study to determine the real versus perceived level of knowledge and skills of instructors concerning their use of instructional technologies.

4. Compare technologies reagarding their effectiveness on learning with this population.

Recommendations for Practice

1. While further studies are needed to determine the impact of the utilization of instructional technologies, this study provided sufficient evidence to strongly recommend increased state appropriations for the purpose of updating instructional technologies for use by instructors and students in the OSCSSs.

2. Based on the finding that the most common use of instructional technology was for instruction, it is recommended that computers, accessories, and audio/visual equipment be acquired for classroom use.

4. Based on the finding that OSCSSs instructors were trained and supported but lacked access to higher level instructional technologies, attempts should be made to bring newer instructional technologies to the OSCSS instructors.

5. OSCSS and ODVTE should continue to provide a well-balanced support system for the use of instructional technologies.

Summary of Recommendations

The current study has provided baseline data concerning the extent to which instructional technologies existed in OSCSSs and how those instructional technologies were used by instructors and students in the OSCSSs.

Generally, the findings from the aforementioned recommended studies would provide additional information that could prove to be a rich resource for OSCSSs and other states skill center school systems as monies are being considered for use in the area of instructional technologies. Specifically, the findings have been presented to the Superintendent of the OSCSSs. Following his reading of the findings, he determined that he should revisit the level of instructional technologies available in OSCSSs. Furthermore, the data can be used to provide data for OSCSSs and the State Department of Vocational-Technical Education to recommend more advocacy for providing OSCSSs with up-to-date and high-end instructional technologies.

This study revealed a need for instructional technologies in the OSCSSs. Means (1993) showed a positive relationship between gains in student learning when combinations of instructional technologies and various methods of instruction were implemented. Furthermore, Casey (1992) stated the use of technologies provided multi-sensory approaches to learning using visual; auditory; and kinesthetic learning modalities.

The instructors in this study commented that instructional technologies seemed to have had a positive affect on their students' level of participation, performance, and motivation to learn. It logically follows that if more instructional technologies were provided, then the greater the likelihood of effective learning in the OSCSS programs. Friedemann (1991) suggested that if the OSCSS training could be established to be comparable to the vocational training in the state's public technology centers, then the credibility of the OSCSSs would be enhanced. It is the position of this researcher that the enhancement of instructional technology in the OSCSSs would be a positive step toward that comparability.

Finally, it is recommended that the current study be used to present information to legislators, the private

sector, and the people of Oklahoma via public service announcements, publications in written or electronic media. The legislators should help provide funds for correctional education. The private sector should be approached to make donations of monies and/or equipment. Moreover, the people who elect legislators and make up the private sector should become more highly aware of the potential benefits that awaits the state of Oklahoma as the inmate population is provided with an employable skill before rejoining society.

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APPENDIXES

APPENDIX A

OKLAHOMA SKILLS CENTER PROGRAMS

Program	**Program**
Air Conditioning & Refrigeration	Equine Management
Automotive Repair	Foodservice
Automotive Service Technology	Horticulture/Landscaping
Building and Home Services	Heavy Equipment Operator
Building Maintenance Technology	Heavy Equipment Maintenance
Business and Computer Technology	Major Appliance Repair
Cabinetmaking	Masonry
Carpentry	Plumbing
Commercial Buildings & Grounds Maintenance	Power Products Technology
Construction Technology	RID Assessment
Educational Enhancement	Telecommunications Technology
Electronics Technology	Transmission Repair
Electricity Technology	Welding Technology

APPENDIX B

RESOURCE USAGE SURVEY

Section I: Instructional Technology

Instructional technology is defined as "the application of scientific and other organized knowledge to practical tasks by organizations consisting of people and machines."

For questions 1-16, mark the appropriate box, indicating whether you:
1 – Disagree; 2 – Somewhat Disagree; 3 – Somewhat Agree; or 4 – Agree. Please include any relevant comments.

	Statement	1	2	3	4	Please Explain
1	I do not use any form of instructional technology.					
2	I have less access to instructional technologies than I would like.					
3	I use my own personal instructional technology.					
4	I have adequate skills and knowledge for using the instructional technologies available to me.					
5	I have training opportunities to develop the technical skills required for use of instructional technology.					
6	I have access to technical support.					
7	Students have **access** to instructional technologies.					
8	Students have the **skills** required to use the instructional technologies available to them.					
9	The use of technology has impacted the students' motivation to learn.					

Section II: Instructional Technology Usage

1 – Disagree; 2 – Somewhat Disagree; 3 – Somewhat Agree; or 4 – Agree. Please include any relevant comments.

		1	2	3	4	Please Explain
10	I use computer applications for instructional preparation					
11	I use **computer applications** to gather and create instructional materials					
12	I use **computer applications** for actual instruction or for student learning activities					
13	I use computer applications to demonstrate specific concepts in class					
14	Students use instructional technologies to complete assignments or to facilitate the learning process					

15. Does **your use of computer applications** affect (answer all that apply):

	1	2	3	4	Please Explain
Depth of content covered					
Breadth of content covered					
Your interaction with students					
Student/Student interaction					
Student participation					

16. Does **your use of audio/visual equipment** affect

1 – Disagree; 2 – Somewhat Disagree; 3 – Somewhat Agree; or 4 – Agree. Please include any relevant comments.

	1	2	3	4	Please Explain
Depth of content covered					
Breadth of content covered					
Your interaction with students					
Student/Student interaction					
Student participation					
Student performance					

17. Indicate the types of software, if any, you use in your instruction or instructional preparation activities. (check all that apply)

Check	Type of Software	How do you use this software?
	Word processing	
	Spreadsheets	
	Simulations	
	Web publishing	
	PowerPoint (or other presentation software)	
	Other (please specify)	

18. Which of the following **audio/visual technologies** to you utilize in the educational process

Check	Type of Audio/Visual technology	How do you use this Audio/Visual technology?
	Video Cassette Recorder	
	Slide projector	
	Liquid Crystal Display projector	
	Laser disc player	
	Digital Video Disc	
	Audio tapes	
	Other (please specify)	

19. Identify instructional technologies you currently do not have but want or need.

_____

20. For what purpose would you use the technology or technologies listed above.

_____

21. Identify instructional technologies you have access to but need more training to be able to use efficiently and effectively.

_____

Section IV: Demographics and Comments

22. Enter your years of experience in the field: _____

23. Enter your age: _____

24. Enter your years of teaching experience: _____

25. Enter your years teaching in vocational education:_____

26. Enter your educational level: _____

27. Enter your years at the skill center: _____

28. Check your vocational program(s):

	Air Conditioning & Refrigeration		Automotive Collision Repair
	Automotive Service Technology		Building and Home Services
	Building Maintenance Technology		Business and Computer Technology
	Cabinetmaking		Carpentry
	Commercial Buildings & Grounds Maintenance		Construction Technology
	Educational Enhancement		Electronics Technology
	Electricity Technology		Equine Management
	Foodservice		Horticulture/Landscaping
	Heavy Equipment Operator		Heavy Equipment Maintenance
	Major Appliance Repair		Masonry
	Plumbing		Power Products Technology
	RID Assessment		Telecommunications Technology
	Transmission Repair		Welding Technology

29. Other comments:

_____

APPENDIX C

COVER LETTER

October 5, 1999

Recipient's Name
2401 recipients address
Shawnee, OK 74804

Name of Instructor,

This letter is to request your participation in an important research study concerning instructional technology in Oklahoma's Skill Center School Systems.

The federal monies available for correctional education are currently in jeopardy. Superintendent Dom Garrison and your local Skill Center Director support and endorse this study that may promote advocacy for Oklahoma Skills Center School Systems (OCSS). Studies of this type will document the quality of the instructional efforts in an effort to build an advocacy agenda.

The following survey is designed to determine the state of educational technology in your skill center. The survey is part of a doctoral research project. Your participation is voluntary.

Specifically, the purpose of the study is to describe the current state and usage of instructional technology in OSCSSs. The following survey contains questions regarding the instructional technology available to you, how you and your students use the instructional technology, and its perceived effect in the instructional process. This survey should take approximately 15-20 minutes to complete.

In no way will your name, program, or facility be identified. All surveys are coded, will be kept under lock and key by the researcher, and all surveys will be destroyed at the completion of the study to ensure confidentiality.

The packet also includes two consent forms that need to be signed if you choose to participate. One consent form is for you to keep. The other needs to be signed by you and returned with the survey in the self addressed envelope.

If you have questions or comments, you may reach either Dr. Reynaldo Martinez at 405-774-7741 or by email at rlm6604_osu@osu.net or Mr. Karis L. Reavis: 405-878-2123 or by email at karis_reavis@mail.okbu.edu

This study may not only prove to increase advocacy for OSCSSs but may provide a model for other correctional facilities in other states. We hope you will choose to participate in this study. Your input is very valuable to the validity of this research.

Thank you in advance for your participation.

Sincerely,

Mr. Karis L. Reavis

APPENDIX D

INFORMED CONSENT FORM

PARTICIPANT CONSENT FORM

I, _____, hereby agree to participate in the research project that assesses the state and utilization of instructional technology in vocational programs in the Oklahoma Corrections Skill Center Schools. I understand the research is part of an Oklahoma State University research project. To maintain confidentiality, all information obtained in the process will be reported in aggregate and/or by code. No specific reference to my identify nor to that of the organization for whom I work will be made at any time. All records of this research will be kept exclusively by the researcher under lock and key. After the research has been concluded and the report approved, all records will be destroyed.

This is done as part of an investigation entitled "The State and Use of Instructional Technology in the Oklahoma Skill Center School System".

The purpose of the procedure is to gather insightful information regarding the presence, use and perceived benefits of instructional technology in Skill Center vocational education programs. This information will then serve as data to reach meaningful findings, conclusions and recommendations for those involved in the planning of future decisions regarding the need for advocacy to increase instructional technology and/or professional development in utilizing instructional technology.

I understand that participation is voluntary, that there is no penalty for refusal to participate, and that I am free to withdraw my consent and participation in this project at any time without penalty after notifying the project director. I may contact Dr. Reynaldo Martinez at telephone number (405) 744-7741 or Mr. Karis Reavis at (405) 273-9327. I may also contact Sharon Bacher, IRB Executive Secretary, 305 Whitehurst, Oklahoma State University, Stillwater, OK 74078; telephone (405) 744-5700.

I have read and fully understand the consent form. I sign it freely and voluntarily. A copy has been given to me.

Date:_____ Time:_____ (a.m./p.m.)

Signed:_____
(Signature of Participant)

Please sign both consent forms and return this copy to the researcher along with your survey.

APPENDIX E

LETTER OF SUPPORT FROM OSCSS SUPERINTENDENT

November 8, 1999

Mr. Karis L. Reavis
Oklahoma State University

In Re: Instructional Technology

Dear Karis:

I encourage and support your research of instructional technology in the Skills Centers School System. I understand that your research will mainly cover the following areas:

(1) The current state of technology in the Skills Centers
(2) How the instructors utilize the instructional technology
(3) How the students utilize the instructional technology

Partially through grant money, we are currently in the process of updating several of our sites and unifying our technology systems in the school system. I believe your research findings will help us identify areas in need of improvement.

My staff and I will be delighted to assis tyou with your research studies.

Sincerely,

Dom Garrison, Superintendent
Skills Center School System

DG:sc

APPENDIX F

E-mail Reminder to Instructional Coordinators

Instructional Coordinator,

I wanted to be certain you had received the survey packets I recently mailed to you. If you have not received your packet, please respond to this e-mail, and I will contact you.

Thanks again for your help,

Karis L. Reavis

APPENDIX G

E-mail Reminder to Instructors

Instructor,

I wanted to be certain you had received your survey packet from your instructional coordinator. If you have not received your packet and would like to complete a survey related to your access to and use of instructional technologies at your skill center, please complete the attached survey and e-mail to karis_reavis@mail.okbu.edu.

Thanks so much for your help,

Karis L. Reavis

APPENDIX H

ACCESS AND USAGE

APPENDIX H

ACCESS AND USAGE

Question	Responses
I have less access to IT than I would like	"Not enough funding" "If available, I would use PowerPoint" "Need newer equipment and software"
Use of IT	"I use a video camera, VCR, and Word Processor"
Use of Computer applications in Class	"Do not have equipment"
Use of Computer to gather and create instructional materials	"Internet is not available at this site. I use word processing to create instructional materials." "Test generation" "This site does not have access to Internet"
Use of Computer applications for preparation	"I keep materials on computer and use the computer to create LAPs and Tests" "I download information" "Handouts"

APPENDIX H CONTINUED

ACCESS AND USAGE

Question	Responses
Student access to Instructional Technologies (IT)	"Students are not allowed on Internet," "Very Limited," "Students have access to printed information from Internet, access to VCRs, Dynomotor, Shift Box, etc.," "Old 386 units," "This is limited"
Students have necessary skills to use available Instructional Technologies	"After training," "Somewhat do," "Most don't initially, but gain skills during class" "I provide what is necessary to complete task"
Students use IT to complete assignments or to facilitate learning	"Resume, Job search, etc."
Use of IT on Students' motivation to learn	"I video outside projects and processes for viewing by students, showing what is possible to attain." "For the current resources we have available" "They experience success," "Keeps them learning" "They are fascinated with it"

APPENDIX I

INSTRUCTIONAL TECHNOLOGY USAGE BY INSTRUCTORS

APPENDIX I

HOW INSTRUCTIONAL TECHNOLOGIES ARE UTILIZED BY INSTRUCTORS

Instructional Technology	Instructional Puposes	Recordkeeping	Communication Outside of Class
Word Processor	LAP development(3), Tests(2), Assignments(1), Handouts(2), Resumes(1), Instructional materials(1), Classwork(1)	Inventory(1) Report writing(2) Roster(1)	Notes(1) Correspondence(2) Memos(1)
SpreadSheet	Handouts(1), Tests(1), Graphs(1)	Attendance(3) Grades(2) Budgets(1) Requisitions(2) Progress Charts(2) Record Keeping(1)	None
Simulation Software	Demos(1), Troubleshooting programs(1)	None	None
PowerPoint	Transparencies(2), Presentations(2), Handouts(2)	None	None
ShopWare	Self-paced instruction(1)	None	None
E-mail	Industry employment needs(1), Job Search (1)	None	None

APPENDIX I CONTINUED

HOW INSTRUCTIONAL TECHNOLOGIES ARE UTILIZED BY INSTRUCTORS

Instructional Technology	Instructional	Record Keeping	Communication outside of Class
Electronics NIDA	None given	None	None
Video Cassette Recorder	Information tapes(1), Training tapes(5), LAP(1),Record Lectures(1), Record Frequently used Processes(1), Cognitive Enhancement(1)	None	None
Audio Tapes	Instructional Tips(1), LAP(1), Cognitive enhancement(1), Training(1)	None	None
Overhead Projectors	Transparencies(1)	None	None
Film-Strip Projector	LAP tasks(1)	None	None
Slide Projector	Training slides(1)	None	None
Digital Video Disc	Shop manuals(1)	None	None
Total Indications	43	15	4

APPENDIX J

EFFECT OF AUDIO/VISUAL EQUIPMENT

APPENDIX J

EFFECT OF AUDIO/VISUAL EQUIPMENT

Questions	Responses
Depth of Content Covered	"Allows for VCR demonstration of large outside projects," "Detailed instructions"
Breadth of Content Covered	"Instructional tapes allow for wider range of instruction," "Covers key points"
Student/Student Interaction	"Discuss process shown on video" "Interaction is encouraged and encountered with videos and lab sessions," "In-class discussion"
Student Participation	"Most students have input after seeing a project for the first time"
Student Performance	"Give the students new ideas and confidence"
Instructor/Student Interaction	None

APPENDIX K

EFFECT OF COMPUTER APPLICATIONS

APPENDIX K

EFFECT OF COMPUTER APPLICATIONS

Questions	Responses
Depth of Content Covered	None
Breadth of Content Covered	None
Student/Student Interaction	"Students will often consult another student before asking instructor"
Student Participation	None
Student Performance	"Broadens their know-how," "Interactive programs offer the greater chance of increased performance"
Instructor/Student Interaction	"Keeps them interested"

APPENDIX L

INSTITUTIONAL REVIEW BOARD FORM

OKLAHOMA STATE UNIVERSITY
INSTITUTIONAL REVIEW BOARD

Date: January 13, 2000 IRB#: ED-00-193

Proposal Title: "THE STATE AND USE OF INSTRUCTIONAL TECHNOLOGY IN OKLAHOMA SKILL CENTER SCHOOL SYSTEMS"

Principal Investigator(s): Reynaldo Martinez
Karis Reavis

Reviewed and Processed as: Expedited

Approval Status Recommended by Reviewer(s): Approved

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1) Please change the IRB office address to 203 Whitehurst on the consent form.

Signature:

Carol Olson, Director of University Research Compliance

January 13, 2000
Date

Approvals are valid for one calendar year, after which time a request for continuation must be submitted. Any modification to the research project approved by the IRB must be submitted for approval with the advisor's signature. The IRB office MUST be notified in writing when a project iw complete. Approved projects are subject to monitoring by the IRB. Expedited and exempt projects may be reviewed by the full Institutional Review Board.

VITA

Karis Lee Reavis, Sr.

Candidate for the Degree of

Doctor of Education

Thesis: TECHNOLOGY INTEGRATION IN VOCATIONAL PROGRAMS AT OKLAHOMA SKILLS CENTER SCHOOL SYSTEMS

Major Field: Occupational and Adult Education

Biographical:

Personal Data: Born in Shawnee, Oklahoma, February 7, 1969, the son of Delbert and Judy Reavis. Married to Monica Stith, August 2, 1991.

Education: Graduated from Dale High School, Dale, Oklahoma, in May 1987; received the Bachelor of Science degree in Psychology from Oklahoma Baptist University, Shawnee, Oklahoma, in May 1991; received Master of Science degree in Industrial/Organizational Psychology from Mississippi State University, Starkville, Mississippi, in May 1993; and completed the requirements for the Doctor of Education degree at Oklahoma State University, Stillwater, Oklahoma, in July, 2000.

Professional Experience: Instructional Coordinator, Municipal Accounting Systems, Inc., Shawnee, Oklahoma, 1991-1998; Manager of Software Support, Municipal Accounting Systems, Inc., Shawnee, Oklahoma, 1998-1999; Director of Instructional Technology, Oklahoma Baptist University, Shawnee, Oklahoma, 1999-present.