Student outcomes : the relationship of teaching style to readiness for self-directed learning
by Jerald Henry Hudspeth

A thesis submitted in partial fulfillment of the requirements for the degree of Doctor of Education
Montana State University
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Abstract:
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The relationship of demographic factors such as age, high school achievement, gender, and college attended in relationship to self-directed learning readiness was also explored. Analysis of covariance was used to analyze the results of posttests with pretests as the covariate. The analysis of the five variables was conducted using the Self-Directed Learning Readiness Scale (SDLRS) to measure the students' orientation to self-directed learning.

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Jerald Henry Hudspeth

This thesis has been read by each member of the
author's committee and has been found to be satisfactory
regarding content, English usage, format, citations,
bibliographic style, and consistency, and is ready for
submission to the College of Graduate Studies.

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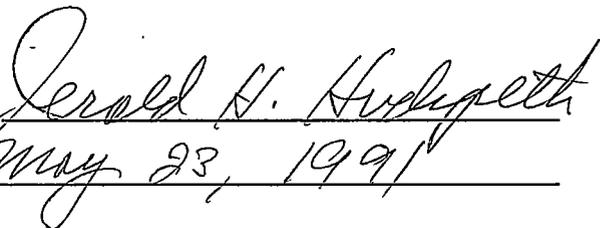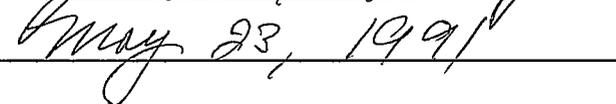
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CHAPTER 1

INTRODUCTION

Many proposals for increasing the instructional

effectiveness of the community college have been offered

(Cohen & Brawer, 1984; Conti, 1984; Cross, 1971, 1976,

1981, 1984; Deegan & Tillery, 1985). In the decades of the

1970s and 1980s, educational leaders have recommended that

postsecondary educational institutions, particularly the

community college, revise the delivery of instruction in

order to produce students who are lifelong learners.

> The obsolescence of knowledge, the rapid growth
> of new knowledge, the shifts in national
> priorities, the multiplication and complexity of
> social problems, and the close relationships
> between the application of knowledge and social
> progress all lead to the conclusions that
> lifelong learning is not only desirable, but
> necessary. (Hesburg, 1973, p. 3)

In a paper presented to the National Conference on

Teaching Excellence, Cross (1984) challenged community

colleges "to prepare students for their future as lifelong

learners and to instill positive attitudes toward learning"

(p. 3). Agreeing with Cross that learning how to learn

should be the goal of the community college, Conti (1984)

discussed a fundamental problem in traditional educational

practice:

Chances are, however, that the education of most
graduates has been content centered. The current
predominate educational philosophy of behaviorism
stresses the mastery of content. Recent national
reports on the status of our schools likewise
emphasize content...unfortunately, the
Information Revolution guarantees that it is
impossible for a student to learn all of the
content in any area and that the portion that is
learned will soon be obsolete. Therefore,
learning for the future will necessitate an
emphasis on process. That is, students will need
to learn the generic and conceptual skills of
learning how to learn... for those who have not
yet learned these skills, the community college
should offer a place to acquire them as they
continue their education. For those who have
mastered these skills, the community college
should avail them one setting in which to
practice the skills. (p. 53)

Entire industries are created, mature, and become

obsolete in such rapid succession that employees cannot

assume that their education has prepared them for a

lifetime of work. Because the pace of change in business

and industry is too rapid for education to stay on the

cutting edge of new technology, no curriculum will last a

lifetime. Therefore, "any student who graduates...from

college without the cognitive skills and the attitudes and

values to pursue continuous learning must be considered a

failure of the educational system" (Cross, 1984, p. 13).

The literature of adult education evidences a

continuing concern for the development of self-directed

learning as a desired outcome of applying the principles of

adult learning. It might be assumed that a learner-

centered teaching style would be the most appropriate mode

to use in meeting the needs of community college students
(Conti, 1978). The art and science of teaching adults has
been termed andragogy (Knowles, 1980). It is based on a
theory about the characteristics of learners which is
different from traditional pedagogy and premised on four
assumptions. The first of these four premises is that "as
individuals mature their self-concept moves from being a
dependent personality toward being a self-directed human
being" (Knowles, 1980, pp. 44-45). Even though this
premise is widely accepted by adult educators and routinely
taught in most introductory adult education classes, little
research has been conducted to verify the proposition that
adults tend toward being self-directed in their learning
behavior.

Based on a survey of respected authorities on self-
direction in learning, a self-directed learning readiness
scale has been constructed. The Self-Directed Learning
Readiness Scale (SDLRS) measures a student's learning
preferences and attitudes toward learning. The SDLRS is a
58-item Likert-type scale developed to determine the extent
to which individuals perceive themselves to possess skills
and attitudes often associated with self-directed learning
readiness (Guglielmino, 1977).

Since the introduction of the SDLRS, a number of
studies have been conducted to measure self-directed
learning readiness (SDLR) in several areas. The studies

using the SDLRs have been concerned with the elderly
(Brockett, 1985b), graduate students in adult education
(Caffarella & Caffarella, 1986), students in four year
colleges (Long & Agyekum, 1983; 1984), and the general
population (Hassan, 1982). However, no studies have
explored the relationship of the community college
classroom instructional process to a student's readiness
for self-directed learning.

While much research has concentrated on the learner,
another line of inquiry in adult education has focused on
the teacher, the other human element in the teaching-
learning transaction. The idea that teaching style has a
significant effect on student academic achievement and
attitudes has been pursued and the conceptualization of
teaching style as the practice of the philosophical
assumptions which follow either a learner-centered or a
teacher-centered approach to teaching was developed (Conti,
1979, 1983, 1985a, 1989; Dressel & Marcus, 1982; Hyman &
Roscott, 1984). The works of several contributors to adult
education theory and practice have been analyzed (Conti,
1978) to reveal that accepted adult learning principles can
be implemented in the classroom through a sharing of
authority in making decisions about the teaching/learning
task. This process has been labeled the Collaborative
Mode. "The Collaborative Mode refers to a learner-centered
method of instruction in which authority for curriculum

formation is jointly shared by the learners and the practitioner" (Conti, 1985a, p. 7).

Based on the analysis of adult education theory and practice, the Principles of Adult Learning Scale (PALS) was developed and validated to measure the degree to which adult educators perceive themselves to use adult learning principles. Items for the scale were based on adult education principles derived from the writings of authorities in the field of adult education (Conti, 1978). This scale has made it possible to measure the influence of teaching style in several areas. For example, the effect of teaching style has been explored in adult basic education classes (Conti, 1985b), among allied health professionals (Conti & Welborn, 1986), in a prison population (Wiley, 1986), and in tribal community colleges (Conti & Fellenz, 1988).

However, there is still a need to extend the study of teaching style influence in the classroom to public community colleges. Little research has been conducted related to the instructional effectiveness of the community colleges even though they enroll the majority of lower division students in postsecondary education today (Deegan, Tillery & Melone, 1985). Therefore, research which explores the concept of self-directed learning combined with the effects of teaching style in the community college

setting may have a potential for assessing the role of the community college in the learning society.

"Observers of the community college have reported unanimously that teaching was its raison d'etre" (Cohen & Brawer, 1984, p. 147). The history of the community college has evolved through stages over the last 90 years (Deegan & Tillery, 1985). However, no matter what additional services a community college may perform, it has remained essentially a teaching institution. In the community college the teachers are freed from the in loco parentis burdens of the elementary and secondary schools. They are also spared the research and publish or perish strictures of the four-year colleges and universities. Therefore, community college instructors are able to concentrate their time and effort in advising, counseling, and teaching their students. Students attending community colleges report that the close relationships that they are able to have with their instructors is one of the most rewarding features of the community college experience (Warren, 1985).

Though the mission of the community college elevates teaching to its first priority and while these institutions have long prided themselves as the breeding ground of instructional innovation, there remains concern about the instructional effectiveness of the community college for the New Students (Cross, 1971, 1976, 1981; Cohen & Brawer,

1984; Deegan, Tillery & Melone, 1985) who are replacing the
traditional age students in college classrooms across the
nation. "New Students were defined as those scoring in the
lowest third of the sample on a conventional test of
academic achievement, whereas traditional students were
those scoring in the upper third" (Cross, 1971, p. xiii).
Students seeking a college education today are not only
non-traditional in academic achievement, but community
colleges have successfully attracted those who are older as
well as women returning to the workforce (Cohen & Brawer,
1984; Warren, 1985). Because of this non-traditional
population, the community college is potentially an ideal
place for the teaching of the skills of self-directed
learning.

The need for community colleges to develop lifelong
learners suggests that the teaching style advocated by
adult educators may be the most appropriate means for
preparing students for the future. However, community
college students have been found to have a preference for a
teacher-centered dependent type of learning/teaching
climate rather than one which fosters participation and
self-directed learning (Cross, 1981). The teaching
technology called Mastery Learning has been recommended by
some for these students in the community college (Cross,
1976; Cohen & Brawer, 1984). However, another report on

research into the desired type of instruction for community college students indicates that

> Despite their desire for structure in their classes, the students wanted differences in abilities to be accommodated. Again by a two-on-one margin, they rejected the suggestion that classes should stay on schedule even when some students get left behind. They stated an overwhelming desire, four or five to one, for class assignments that allow students to work together, which may express the apprehension felt about studies by many returning students. By a slight margin of about three to two, they expressed a preference for small classes that meet only once a week rather than large classes that meet more often. Taken together, these preferences, which were expressed consistently in all twenty of the colleges, indicate a general desire for the faculty to give clear direction to the students' learning while including extensive practical experience on the job and in the community and allowing students the opportunity for collaborative learning. (Warren, 1985, pp. 66-67)

Purpose of the Study

The purpose of this study was to examine the relationship of teaching style to community college students' readiness for self-directed learning. To accomplish this purpose, the study involved several major components. The first was to determine the differences in the perceived teaching styles of community college faculty. The second component was to determine community college students' perceived readiness for self-directed learning. The third component of the study was to determine the relationship between the perceived teaching style of the

faculty and the students' readiness for self-directed learning. The fourth component of the study was to determine if students' readiness for self-directed learning is independent of achievement, age, gender, and college.

Significance of the Study

While traditional college students in the United States have been studied extensively, much less is known about the growing number of non-traditional students now enrolling at college campuses in large numbers. For example,

> Relatively few papers have been published about students at two-year schools which are predominately commuter campuses, the sector of higher education in which enrollment is increasing at the fastest rate. Much of the research using residential students may not apply to minority, older, part-time, and commuter students. (Kuh, Bean, Bradley, Coomes & Hunter, 1986, p. 191)

Information on the effects of instruction is difficult to obtain because of the "number of variables that must be controlled in any study" (Cohen & Brawer, 1984, p. 166). Certainly the long-term effect of instruction, such as proclivity to engage in lifelong self-directed learning, is more difficult to verify than short-term academic achievement. However, research which attempts to discover an effective teaching style for developing lifelong learners in the classroom is of major importance to the teaching mission of the community college. Consequently,

there is a need to experiment with measuring the outcomes

of learning while students are in college.

> Major questions about the assessment of learner
> outcomes are: (1) What are the findings of
> efforts to assess short and long term outcomes of
> participation in community college programs?
> (2) What strategies and instruments have been
> used to measure outcomes of different groups of
> students? (3) What implications for instruction,
> curriculum, and counseling can be drawn from
> current findings? (4) How can university and
> community college educators collaborate to
> conceptualize this complex challenge, to design
> instruments and develop a relevant methodology
> for the future? (Deegan, Tillery & Melone, 1985,
> p. 309)

Cross (1981) and Knowles (1979) note the need for

study in this area. Cross analyzed a reported preference

of older adults in community colleges for teacher-centered

learning, which is in sharp contrast to the need to teach

adults in a self-directed mode as reported in the adult

education literature.

The assumption that adults move toward self-direction

as learners, which is a major premise of andragogy, has not

been established by sufficient research. In commenting on

the andragogy and pedagogy debate narrated in the Adult

Education Quarterly, Knowles (1979) stated:

> My intention, therefore, was to present an
> alternative set of assumptions to those that had
> been traditionally made by teachers of children,
> so that teachers would have another choice. I
> saw them as assumptions to be tested, (not to be
> presumed). (p. 52)

Therefore, this study has made a contribution to

knowledge about the relationship between teaching style and

the student outcome of readiness for self-directed learning. No research has yet directly tested the assumption that the use of a distinctive teaching style, such as the collaborative method of instruction, will in fact increase a student's ability to become a self-directed learner in the community college setting.

General Procedure for the Study

The study was conducted at four community colleges. Dawson Community College, Miles Community College, and Flathead Valley Community College are in Montana, and Spokane Community College is in Spokane, Washington. Those institutions were selected because they are comprehensive community colleges with governance and funding structures typical of community colleges in the Northern Rocky Mountain Region. Permission was obtained for conducting the study from the president or dean of instruction of each community college.

Each member of the faculty of these four community colleges was requested by mail to participate in this study. They were asked to assess their individual teaching style by using the Principles of Adult Learning Scale (PALS) which was provided. Those instructors who responded to this request were also asked to administer the Self-Directed Learning Readiness Scale (SDLRS) to students in their classes.

The problem was investigated by using two measurement scales. From the responding community college faculty, PALS identified those instructors who exhibited one of three teaching styles: (a) learner-centered, (b) teacher-centered, or (c) eclectic. Students in intact classes were administered the SDLRS by their instructors. Data were also gathered on the student's age, gender, and level of high school academic achievement.

The instructors taught a wide variety of courses in the regular curriculum at the four community colleges. The instructors were provided detailed instructions either in person or by mail for administering the SDLRS to the students. If a student took more than one course from a single instructor, only one score on the SDLRS for the student was used. Confidentiality of instructors and students was achieved by a coded key.

Students taking these classes were assigned to one of three categories based upon the teaching style to which they had been exposed during the 10 weeks of instruction. All students involved in the study were pretested and posttested using the SDLRS. The data obtained were analyzed using analysis of covariance.

Limitations and Delimitations

Limitations of the study were the following:

1. This study was limited by the use of instructors who volunteered to participate.

2. The relationship of students' readiness for self-directed learning to teaching style was limited to the Self-Directed Learning Readiness Scale and the Principles of Adult Learning Scale.

3. The relationship of students' readiness for self-directed learning to teaching style was limited to the amount of change that can be expected to occur in a 10 week quarter of instruction. Because the quarter system was employed in the community colleges studied, this is the amount of time the system allows the student to be exposed to a teacher. Therefore, the structure controls the time frame of analysis for this study.

Delimitations of the study were the following:

1. This study was delimited to the students enrolled in community college classes from September of 1989 to June of 1990 at three public community colleges in Montana and one in Washington. These community colleges have funding, governance structures, and enrollment patterns typical to the Northern Rocky Mountain region.

2. This study was delimited to examining readiness for self-directed learning in relationship to teaching

style, achievement, age, gender, and college of attendance.
These variables are described in the adult and higher
education literature as important factors influencing
student outcomes.

3. The sample of this study was delimited to students
who had been exposed to only one teaching style during the
quarter. Because it was impossible to associate any
behavioral changes in students to teaching style for those
students who had experienced several teaching styles during
the quarter, the sample for the teaching style analysis
included only students who either had only one class or had
instructors with similar classification of styles.

Definition of Terms

Community College: "Any institution accredited to
award the associate in arts or sciences as its highest
degree" (Cohen & Brawer, 1984, pp. 5-6). A community
college has five philosophical bases: (a) a commitment to
open-access and low-cost programs; (b) program
comprehensiveness; (c) emphasis on programs and services in
adult education and continuing education; (d) local
control; (e) adaptability through responsiveness to
changing needs in society (Deegan & Tillery, 1985).

New Students: College students whose performance on
academic tests in high school was barely passing and below
average. Low academic ability as traditionally measured in

schools is the distinguishing characteristic of New Students. However, they are secondarily defined as being older, as having a higher proportion of females, and as having a preference for the occupationally oriented comprehensive community college (Cross, 1971, 1976; Cohen & Brawer, 1984; Warren, 1985).

Principles of Adult Learning Scale (PALS): An instrument which measures the degree to which adult educators perceive themselves to practice adult learning principles. PALS is a 44- item instrument which can determine if teachers perceive themselves to use a teacher-centered or a learner-centered teaching style (Conti, 1985a).

Self-Directed Learning: The learners' ability to independently plan, conduct, and evaluate their learning activities (Guglielmino, 1977). For this study, self-directed learning was measured by the Self-Directed Learning Readiness Scale.

Self-Directed Learning Readiness Scale (SDLRS): An instrument which measures a student's learning preference and attitudes toward learning. The SDLRS is a 58-item Likert-type scale developed to determine the extent to which individuals perceive themselves to possess skills and attitudes often associated with self-directed learning readiness (Guglielmino, 1977).

Teaching Style: An instructor's pervasive qualities that persist even though situations change. It is a label applied to various identifiable types of teaching behaviors which are consistent even though the content being taught may change (Fischer & Fischer, 1979). For the purpose of this study, teaching style was measured by the Principles of Adult Learning Scales.

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

The concepts of the New Student, self-directed learning and teaching style will be discussed in this review of the literature. The New Student who is enrolling in the community college today has significantly different needs and attitudes than the traditional freshman college student in earlier generations. The needs of the New Students may be appropriately met by a teaching/learning environment that features instruction in the skills and attitudes of self-directed learning facilitated by an instructor who practices a learner-centered teaching style.

The New Student

There is a New Student to higher education, and one whom the institutions of higher education are not prepared to educate (Cohen & Brawer, 1984; Cross, 1971, 1976; Warren, 1985). Traditional education has failed these students in the past; unless substantial changes are made, it will fail them in the future (Cross, 1976). It is clear that many of the learning problems of the New Students were

directly attributable to their school experiences. The distinguishing characteristic of the New Student seeking postsecondary education is the low level of academic achievement. Based on a meta-analysis of four large scale survey research studies of high school and community college students, the New Students in higher education will be primarily students whose performance on academic tests is barely passing and below average. "Therefore, New Students were defined as those scoring in the lowest third of the sample in a conventional test for academic achievement, whereas traditional students were those scoring in the upper third" (Cross, 1971, p. xiii).

Many educators, as well as the general public, are still thinking of New Students largely in ethnic terms. Yet the New Students are primarily Caucasian, not Black or Chicano. The majority come from working class families. A major part of the growth in New Students in community college enrollments between 1970 and 1980 was due to an increased enrollment of women, and as the average age of students increased over the last two decades, the ratio of women to men in the community colleges also increased. These women, often in their thirties or older, are looking for ways to expand their horizons and generally are more concerned with occupational training than are men. The women are less confident than men about their academic abilities and are apprehensive about classroom competition.

These older women from working class families may often be the first in the family to attempt postsecondary education. Thus, they are attracted to courses and programs which help their transition through the educational system (Warren, 1985).

The New Students are also characterized by their part-time and intermittent attendance. Part-time students in general are more concerned with acquiring immediate job skills and tend to enroll in occupational courses or programs. The phenomena of part-time attendance also seems to be related to the older age of the students.

> Students twenty-five years and older tend to enroll intermittently and to be part-time. Proportionately more are white and middle class. They move in and out of college, perhaps at more than one college, and they mix studies with outside commitments--to a job, family or both. (Warren, 1985, p. 58)

However, students "who have not considered college in the past, but who began entering college in the 1970s, are distinguished more by low test scores than by any other single measure available including race, sex, and socio-economic status" (Cross, 1971, p. 14).

Cross' (1971) analysis demonstrated that the New Students have educational problems; they do not perform traditional educational tasks with competence. Fundamentally, these New Students in higher education were swept into college by the rising educational expectations of American society. Most are Caucasians whose fathers

work at blue collar jobs. Unfortunately, they have a
different orientation to school learning tasks than do
traditional students because of the considerable difference
in their past learning experiences at home and in school.

Historically in the United States, there has been a
tendency to think of educational reform in general terms
and therefore to think that what is good for some students
is good for all. Consequently, instructional innovators in
the community colleges have tended to apply the same kind
of changes to their institutions as those recommended for
high schools or senior colleges. Frequently this has been
a unidimensional inclusion of high technology media, such
as television or computers, in the instructional process.
However, the areas that need changing to make traditional
education more appropriate for New Students are not
necessarily those advocated by the elite colleges that
frequently serve as models for educational change.
Community colleges and vocational technical centers need to
develop their own brands of instructional innovations.
Cross (1971) maintained that a primary goal in the
reformation of education for New Students should be to help
them assume responsibility for their own learning.
"Indeed, if we do not pass this responsibility to adult
students then we have not done our job in preparing them
for a life that will require a never ending capacity to
learn new things" (Cross, pp. 53-54).

There is also considerable evidence that many community college faculty members tend to pattern their professional aspirations along the traditional subject matter lines of the university academic model. Most college faculty whether at a community college, senior college, or university came from the type of students that Cross has labeled traditional. It is therefore not surprising that the faculty's interests and those of today's traditional college student should coincide along intellectual dimensions. That is a major reason for concern because patterning community college instruction after the kind of education that appeals to the faculty can be a step backwards for the New Students. Moreover, "their needs and interests are different from those of traditional college students. Perhaps even more important, they are different from those of traditional college faculty members" (Cross, 1971, pp. 74-75).

Traditional students and traditional faculty members perpetuate their own scheme of values.

> New Students are more uncomfortable in the traditional academic educational system than are the students for whom present educational experiences were designed. They are more likely than traditional students to feel that the academic pace is too fast for them; they are more likely to feel nervous or shy in the competitive classroom; they are more eager for college assistance with problems related to academic achievement, and they are more interested in counseling help with personal problems. (Cross, 1971 p. 83)

Surveys of community college students revealed that the New Students also have some ideas about what they would like schools and colleges to do (Cohen & Brawer, 1984; Cross, 1971; Warren, 1985). New Students are likely to be attracted to courses in colleges that are seen as practical preparation for their vocational futures. "New Students attending community colleges indicate feelings of progress in learning how to get along with people, in learning job related skills, and in developing a satisfactory philosophy of life" (Cross, 1971, p. 83). Although New Students show some satisfaction with traditional vocational education, it is not sufficient to meet their needs by separating higher education into two tracks--academic and vocational.

In addition to being attracted to occupational programs and courses, community college students are characterized by the uncertainty of their enrollment patterns and by the varied ways they use the college programs to fit their purposes.

> Several characteristics of community college students--their age, part-time enrollment, attendance close to home, intermittent attendance, concern for occupational preparation and growth, and commitment outside of college-- point to a second direction for community colleges. The involvement of the colleges directly with their surrounding communities... many colleges are already moving in that direction with collaborative programs with local businesses and industry. (Warren, 1985, p. 73)

Community colleges have a special educational mission in providing career programs for New Students. A profile

of an attractive college for a typical New Student based upon a composite of the preferences revealed in questionnaire data might be pictured something like the following: It is a friendly place where good teaching is emphasized and where faculty members take an interest in students. It offers courses clearly relevant to career preparation, stressing the development of skills over the manipulation of abstract concepts. As a matter of fact, the institution favored by New Students is beginning to look very much like today's comprehensive community colleges (Cross, 1971; Warren, 1985).

However, Cross (1971) listed a number of areas wherein traditional instructional practices cause problems for the New Students. New Students drop out of traditional schools, quit listening to lectures, fail to put forth their best efforts, and score low on conventional tests. Moreover, they get low marks, fail to develop self-confidence, and are nervous and tense in class. They are caught in the impossible bind of wanting to be successful, but of knowing they will be required to display the learning style and values only a traditional academic curriculum will satisfy.

Community colleges have not faced the fact that equality of educational opportunity requires more than guarantees of equal access to postsecondary education (Cohen & Brawer, 1984; Cross, 1971; Donovan, 1985; Warren,

1985). The primary means by which community colleges have attempted to answer the challenge of access has been through the development of remedial programs to prepare students for regular college work. However, compensatory programs in community colleges are not going to mold many New Students into traditional students. Further, New Students will be the losers if colleges continue to concentrate on access programs that merely assure the entrance of New Students into traditional programs of education.

> Quality education consists not in offering the same thing to all people in a token gesture toward equality, but in maximizing the match between the talents of the individual and the teaching resources of the institution. Educational quality is not unidimensional. Colleges can be different and excellent too. If New Students are different, and not simply less capable academicians than traditional students, then I believe that education for New Students must be different in order to be excellent.
> (Cross, 1971, p. 162)

Although many educators may agree that there is an urgent need for educational reform, educators do not agree on the direction that the reformation should take. Although the question of who shall be taught in postsecondary programs has been answered and the nation is moving to implement universal education for the masses, the main arguments about what shall be taught and how that shall be taught remain unresolved (Cohen & Brawer, 1984; Cross, 1971, 1976, 1981; Deegan, Tillery & Melone, 1985).

Most of the modifications in higher education that
have been made, or even suggested, to accommodate the era
of universal education are concerned with the structures
and forms of college programs rather than with either
course content or the style of teaching (Donovan, 1985).
Major energies have been directed toward getting New
Students into college and keeping them there. Open
admissions, special recruitment of disadvantaged students,
and financial aid programs are practices in widespread use
throughout the country to attract the New Students to the
colleges. Remedial courses, counseling, and pass/fail
grading are common methods designed to keep New Students in
college. Since getting New Students into college has been
the most single-minded goal since the 1960s, virtually all
evaluations of achievements have been concerned with
quoting statistics on increased rates of access and
retention. "Only recently have a few scattered voices
questioned whether recruitment and retention are really the
goals. The goal of educators is to educate" (Cross, 1971,
p. 163).

The first business of educational programs for New
Students should be to provide a re-orientation to learning
itself (Cross, 1971). Once comfortable in learning
situations, the student is free to pursue learning in a
personal sphere of interest and talent. The student who
knows how to tackle the job of learning new things may

choose to apply these skills to the traditional tasks of
education or the student may apply it to non-traditional
studies. The goal of re-orienting the New Student to
learning is to change attitudes, but the student must also
be given ample practice in learning. Instructors who want
to be successful in the re-orientation courses for the New
Students have a special need for understanding the learning
process (Case, 1985; Cross, 1971, 1976; Smith, 1982).
However, the instructors' task is more complicated. They
need to not only know but also to feel the learning
problems of New Students.

> In the final analysis, a teacher who cares must
> have enough teaching skill and confidence in the
> student to create the environment and situations
> that require a student's best efforts. It would
> be ideal if each student could design a learning
> task of his own choosing, but realistically it is
> desirable to develop a number of tasks very
> carefully and let the student chose which task to
> undertake. (Cross, 1971, p. 171)

In summarizing the study of the New Students, Cross
(1971) recommended a program of instructional reform which
parallels the mode of instruction advocated by many adult
educators. When students better understand the process of
learning, they can better evaluate their own progress. The
valuative function should gradually move from teacher to
students until ultimately the students begin to accept
responsibility for their own learning and become
independent of the teacher. When students direct their own
learning, they have learned the most important lesson that

education can teach. Lifelong learning will be a
requirement of the future. In the final analysis enabling
people to learn however, whenever, and whatever they either
need to learn or desire to learn is the aim of all
education. However, the long-term effects of instruction,
such as a readiness to engage in lifelong self-directed
learning, are more difficult to verify than short-term
academic achievement through research in actual classroom
settings.

Concept of Self-Directed Learning

One of the most important findings to emerge from
adult education research in recent decades is the
realization that the vast majority of adult learning
activities occur outside of the institutional setting and
are planned, carried out, and evaluated primarily by the
learners themselves. Self-directed learning is not a new
idea. Indeed, history offers countless examples of
successful, self-taught individuals. However, not until
the publication of Allen Tough's 1970 study of adults'
learning efforts did adult educators began to undertake in-
depth studies of self-directed learning and to address
various implications for practice. Tough's (1971) study of
Adult Learning Projects set the original parameters of the
area of study for self-directed learning.

In the past two decades the concept of self-directed learning has been the focus of much attention and study by adult educators (Brookfield, 1985b, 1986; Caffarella & O'Donnell, 1988; Cross, 1981, Knowles, 1975, 1980; Mocker & Spear, 1982). The proliferation of self-directed learning studies as documented in literature reviews (Brookfield, 1986; Caffarella & O'Donnell, 1988; Mocker & Spear, 1982) indicated the importance adult educators place on self-directed learning. These reviews present evidence that self-directed learning is occurring with the vast majority of adults. However,

> The assumption that self-directed learning exists and has been around for ages, does not carry with it any further assumptions, such as: self-directed learning is good, people prefer self-directed learning, adults want and need help in self-directed learning, or that a valid, agreed-upon definition for self-directed learning exists. (Caffarella & O'Donnell, 1988, p. 42)

Self-directed learning has been envisioned as providing a unifying concept for the disparate field of adult education. Self-directedness implies that the learners regulate, control, or conduct their own learning and that this is a feature of adulthood. A definition of self-directed learning developed by Knowles (1975), a foremost adult educator, stated:

> In its broadest meaning, self-directed learning describes a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing

appropriate learning strategies, and evaluating
learning outcomes. (p. 18)

Adult educators have ascribed a variety of labels to
this process: self-planned learning, inquiry method,
independent learning, self-education, self-instruction,
self-teaching, self-study, and autonomous learning.
However, Knowles (1975) discounted those terms as implying
learning in isolation. "Self-directed learning usually
occurs in association with various kinds of helpers, such
as teachers, tutors, mentors, resource people, and peers"
(p. 18).

Other educators have been concerned with the problem
of terminology as well. Tough (1971) referred to self-
planned and self-teaching. After rejecting the terms
individualized learning, self-teaching, autonomous
learning, autodidactic activity, and isolated learning,
Brookfield (1988) used the term independent adult learning.
However, Cross (1981) joined the growing consensus in
labeling the concept self-directed learning in her meta-
analytic study, Adults As Learners. Mocker and Spear
(1982) also used the term self-directed learning. Indeed,
this term has dominated the adult education literature in
the 1980s (Brookfield, 1986).

The concept of self-directed learning has been defined
in a variety of ways (Bonham, 1989). These include an
innate characteristic of all adult learners; a goal to

which adult learning should be moved; as an instructional

method used naturally by adults and as one which should be

taught to them; as an instructional design calling for

planning one's own learning; and as a process in which the

learner moves from one learning episode to the next in an

order governed by availability of resources. Self-

direction is increasingly viewed not simply as an attribute

which people either have or do not have, rather as a

quality which may be present in varying degrees throughout

the population (Kasworm, 1983).

Mezirow (1985) agreed with other adult educators that

self-directed learning has been adopted as the central

concept in adult education. However, he argued that

> There is probably no such thing as a self-
> directed learner, except in the sense that there
> is a learner who can participate fully and freely
> in the dialogue through which we test our
> interests and perspectives against those of
> others and accordingly modify them and our
> learning goals. (p. 27)

Further, Mezirow (1985) differentiated three

interrelated and distinct kinds and functions of adult

learning. Each domain has its own purpose, content, and

methods, and each allows for self-directed learning. They

are (a) instrumental learning, which includes task oriented

problem solving learning required to control the

environment; (b) dialogic learning encompassing attempts

to understand what others mean when communicating; and (c)

self-reflective learning which involves psychological assumptions gained earlier in life.

According to Mezirow (1985), the purpose of adult education is to enfranchise adults. That is, it is to enable adults to participate fully as self-directed learners in their quest to explore the meaning of experience. Indeed, such learning is of limited value unless it produces an internal change in consciousness.

Mezirow is one of only a few writers in adult education whose principle concern is the process of internal change which occurs in adults as a result of the educational process. He has recently been joined by Brookfield (1985b, 1988) who appears to have moved firmly into the small group who argue that acquisition of certain behavioral skills, such as setting goals, is not sufficient to define the concept of self-directed learning.

Brookfield (1985b, 1986, 1988) has critiqued the concept of self-directed learning and has been concerned with self-directed learning as the aim of adult education. Along with Mezirow he has defined the aim of adult education practice as the nurturing of self-directed empowered adults. Further, Brookfield distinguished between two forms of self-directed learning. One form involves the practical elements of self-directed learning such as goal setting, resource identification, strategy selection, and the evaluation of outcomes. The second form

of self-directed learning refers to a particular internal change in consciousness. However, the fundamental problem "is the fact that a prescriptive aim (that we should encourage learner independence) has become confused with an empirically based proposition (that adult learning styles are inherently self-directed)" Brookfield, 1988, p. 12).

Cross (1981) identified the concept as "deliberate learning in which the person's primary intention is to gain certain definite knowledge or skills" (pp. 186-187). Moreover, the learning may be self-directed or it may consist of participating in organized instruction. Cross concurred with Knowles' basic assumption that adult learning is problem centered. "Research generally supports the notion that most adults who voluntarily undertake a learning project do so more in the hope of solving a problem than with the intention of learning a subject" (p. 189).

Further, Cross (1981) noted that self-directed learning does not imply isolated learning; in fact, it tends to involve more interpersonal contact than is the case with classroom education. The major problem seems to be finding the appropriate assistance or resources when barriers occur in the process. Moreover, the information researchers have generated about self-directed learning and what actually happens during the course of a learning project is generally unknown, and "more indepth study of

how learning actually takes place in everyday settings is a necessity" (p. 199).

Reviews of the literature on self-directed learning have identified a varying number of ways which the research has been categorized (Brockett, 1985a; Caffarella & O'Donnell, 1988; Mocker & Spear, 1982). Caffarella and O'Donnell identified five research categories: (a) nature of the philosophical position; (b) verification studies; (c) nature of the method of self-directed learning; (d) nature of the individual learner; and (e) policy questions. Brockett (1985a) divided the research into three categories: (a) descriptive studies growing out of Tough's works on learning projects; (b) attempts to build a theoretical framework for understanding self-directed learning; and (c) quantitative studies that have examined the relationship between self-directed learning readiness and a range of psychosocial and educational variables. Mocker and Spear (1982) classified the various types of adult learning around the concept of control. Using that scheme, they divided the concept of learning and the research on the basis of the following: (a) formal, (b) nonformal, (c) informal, and (d) self-directed learning.

Following the classification scheme of Caffarella and O'Donnell (1988), research on readiness for self-directed

learning would be classified under the nature of the

individual and would answer the who and what questions.

> Basically the category looks to an understanding
> of the individual's characteristics and styles in
> order to get a better feel for the learner. Six
> subcategories emerged from the review of
> literature in this area: demographic data,
> learning or cognitive style, readiness, locus of
> control, psychological health, and personality
> characteristics. (p. 52)

Readiness for Self-Directed Learning

Self-directed learning is a process in which

individuals take the initiative, with or without the help

of others, to gain certain definite knowledge and skills

(Cross, 1981; Knowles, 1975; Mezirow, 1981). Knowles

(1975) and Mezirow (1981) have outlined the basic skills

that are necessary for self-directed learning. These

skills include the ability to: (a) decide what knowledge

and skills to learn; (b) diagnose learning needs

realistically with help from teachers and peers; (c)

translate learning needs into learning objectives in a form

that makes it possible for their accomplishments to be

assessed; (d) relate to teachers as facilitators, helpers,

or consultants and to take the initiative in making use of

their resources; (e) relate to peers collaboratively to see

them as resources for learning; (f) identify human and

material resources appropriate for different learning

objectives; (g) select effective strategies skillfully and

with initiative; (h) gain knowledge and skills from resources utilized; (i) evaluate one's own efforts and obtain feedback from others; (j) facilitate problem posing and problem solving, including problems with the implementation of individual and collective action; (k) review motivation for learning; and (l) help the learner to understand the full range of choices as opposed to encouraging the learner to make a specific choice.

In concluding an article, Mezirow (1981) recognized the need to "respond to the learners' educational need in a way which will improve the quality of his/her self-directedness as a learner" (p. 21). He continued to elaborate on the implications of adult learning theory by asserting that it "is almost universally recognized, at least in theory, that central to the adult educator's function is a goal and method of self-directed learning" (p. 21). Mezirow defined andragogy "as an organized and sustained effort to assist adults to learn in a way that enhances their capability to function as self-directed learners" (p. 21). What seems clear is that these adult educators defined the goal and the method of adult education practice in terms of the development of self-directed learning behavior.

Guglielmino (1977) developed the Self-Directed Learning Readiness Scale (SDLRS) to measure the degree to which adults exhibit the skills and attitudes associated

with a self-directed orientation to learning. The study
obtained item consent material using a modified Delphi
technique based on the expert opinion of 14 authorities on
self-directed learning. This research procedure produced a
Likert-type self-reporting mechanism. The SDLRS is
designed to measure the presence of attitudes, abilities,
and personality characteristics identified in a Delphi
survey as being important for self-directed learning.

The SDLRS has been utilized in a number of research
studies since 1977. Brockett (1985a) classified the
research on readiness for self-directed learning into two
major categories. First, the concentration of effort has
been to understand the relationship between self-directed
readiness and a variety of psychosocial variables. These
studies have found a correlation between SDLRS and
creativity and originality (Torrance & Mourad, 1978), self-
concept (Sabbaghian, 1980), participation in learning
projects (Hassan, 1982), and race and age (Long & Agyekum,
1983, 1984). The second category of research involving the
SDLRS has been to use it as an instrument to measure
students' perceived readiness for self-directed learning.

Learners are in varying stages of cognitive and
psychological readiness for self-directed learning
activities. It seems this experience of varying levels of
self-directedness is common. The SDLRS has been helpful in
assessing these levels. Given that there are so many

possible interpretations of self-directed learning, there

is an obvious need for much more work in this area.

Different scales will assess different capabilities,

depending on how program organizers define self-direction

(Brookfield, 1988).

Numerous studies have been conducted using the SDLRS.

Torrance and Mourad (1978) indicated that the SDLRS scores

of graduate students correlated positively with their

scores on three creativity measures. The researchers

administered the SDLRS along with several measures of

creativity to 41 graduate students in education. Their

research supported the construct validity of the SDLRS and

several measures of creativity. "It appears that readiness

for self-directed learning is associated with skills in

originality of thinking, ability to produce analogies,

motivations of creative personalities, creative experiences

and achievements, and a right hemisphere style of learning

and thinking" (Torrance & Mourad, 1978, p. 1171).

They emphasized that the study dealt only with the

construct validity of the SDLRS and its relationship to a

variety of creativity variables and styles of learning and

thinking.

A number of studies utilizing the SDLRS have been

conducted showing a relationship between the SDLRS and an

enhanced self-concept or greater life satisfaction.

Sabbaghian (1980) concluded that a significant relationship

between SDLRS and self-concept was found among adult undergraduate students. Hassan (1982) found that highly self-directed learners as measured by the SDLRS conducted a greater number of learning projects and experienced a higher level of satisfaction with their projects than participants with lower SDLRS scores. Brockett (1985b) discovered that a relationship existed between older adults' perception of self-directed learning readiness and the degree of satisfaction they ascribe to their lives. However, previous education was found to be a stronger predictor of SDLRS than life satisfaction (Brockett, 1985b; Curry, 1983).

Several studies have been conducted with a view toward validation of the SDLRS (Long & Agyekum, 1983, 1984, 1988). "Validation of Guglielmino's SDLRS, the most popular instrument currently being used to measure self-direction in learning, is imperative. Validation of the instrument is critical to the advancement of theory and practice" (Long & Agyekum, 1988, p. 255). Data generated in the 1984 study and compared with data obtained in the 1983 research of Long and Agyekum suggested three major findings: (a) there is a significant racial difference in SDLRS scores; (b) there is no significant relationship between the rating of the students as self-directed learners by faculty members and students' SDLRS scores; and (c) there is an association between SDLRS scores and age and

educational level. In both studies it appeared that
faculty ratings of students' self-direction in learning are
associated with race and with age. The authors did not
have any explanation for this relationship. They concluded
that the findings are supportive of the validity of the
SDLRS despite the absence of the association between
faculty ratings and student performance and the significant
differences that were noted in the faculty ratings
according to racial composition of the students studied.
They concluded that "significant associations existed
between the SDLRS scores and variables such as age and
educational level. These findings are the source of the
strongest support for the validity of the scale" (Long &
Agyekum, 1983, p. 87).

Readiness for Self-Directed Learning
Within an Institutional Context

A graduate course explicitly designed to implement the
learning contract format and Knowles' (1975) self-directed
learning format "examined the impact of a self-directed
contract learning course upon participant self-directed
learning behavior and attitudes" (Kasworm, 1983, p. 45).
The instructional focus of the study was concerned directly
with facilitating the acquisition of self-directed learning
competencies among adult education graduate students. The
data for this study were collected from 33 students in two

course sessions. Three methods were used to collect data on the students' change in self-directed learning behavior and attitudes. Two evaluation instruments were employed: (a) SDLRS as a pretest and posttest; and (b) a course evaluation. Additionally, the facilitators and two students in each course session kept diaries of observed behavior in order to analyze student concerns.

A t-test of the gain in scores between the pretests and posttests on the SDLRS indicated a significant overall positive gain in readiness for self-directed learning for this limited sample of graduate students. However, the author cautioned readers against assuming a relationship exists between the course treatment and the change in the scores on the SDLRS. Even though one-fourth of the participants judged the course to be difficult and indicated they would not seek out another self-directed formatted course, the course evaluations suggested that the majority of the students perceived the experience to be worthwhile and satisfying.

The strongest support for a subset of the competencies of self-directed learning behaviors measured by the SDLRS was for the collaborative support and group inquiry instructional strategies. The content analysis of the diaries supported the data gathered with the other two measures. Kasworm concluded that the majority of students made a shift toward higher levels of self-directedness in

learning behavior and attitude. In summary, the evidence demonstrated that a course can influence the majority of participants in their development of self-directed learning attitudes and behaviors. Future research should examine other instructional formats for their development of self-directed learning (Kasworm, 1983, p. 53).

Two additional studies were conducted concerning the learning contract as an educational technique for promoting readiness for self-directed learning (Caffarella, 1983; Caffarella & Caffarella, 1986). Those studies assumed that facilitating the development of greater self-directedness in adult learning is an aim of many adult educators. Although the concept of self-directedness in adult learning has been developed from research which was conducted primarily outside the formal educational institutional framework (Brockett, 1985b; Brookfield, 1986; Cross, 1981; Tough, 1971), the studies noted that a number of adult educators (Knowles, 1975, 1980; Tough, 1971) have advocated changes in the educational practices of institutions of higher education "to integrate the idea of self-directedness in learning into the formal college curriculum" (Caffarella & Caffarella, 1986, p. 226). The Caffarellas advocated the integration of the learning contract into the teaching process as one way of developing a self-directed approach to learning in higher education.

A study of graduate students in adult education suggested that the use of the learning contract format has merit as a method for developing student responsibility for the learning process. Use of the learning contract had an effect on self-directed learning skills in three areas: (a) students learning to relate to teachers as facilitators; (b) ability to translate learning needs into learning objectives; and (c) ability to identify resources. Also the study found that the students were continuing to use self-directed learning skills in that some of the students had changed the way they were teaching (Caffarella, 1983).

Although the studies indicated that the use of the learning contract format as a teaching device facilitates the development of self-directed learning skills for graduate students, Caffarella (1983) cautioned that its use for other levels of education depends on the background and level of the learners, the mission of the educational institutions, and the setting and the focus of the educational experience. The study recommended that the format might need to be modified for use in the community college setting because of the characteristics of learners there. Finally, Caffarella warned that the use of the learning contract as a teaching strategy requires a skilled and experienced instructor.

In a subsequent study of graduate students' readiness for self-directed learning, Caffarella and Caffarella (1986) reported the SDLRS has been demonstrated by a number of previous studies to be "both reliable and valid for diagnosing self-directed learning readiness and for evaluating programs designed to increase self-directed learning readiness" (p. 228). However, a significant finding of this study was the lack of any change in the students' readiness for self-directed learning as measured by the SDLRS as a result of the exposure to the use of the learning contract format in adult education graduate courses. This finding conflicts with both the earlier Caffarella (1983) study and Kasworm's (1983) research. The authors of the 1986 study concluded that this apparent conflict may be due to sample differences, instructor bias, the very high pretest scores of the subjects studied, or the lack of appropriateness of the scale for this group of participants.

Brockett (1985a) commented on the question of the appropriateness of the SDLRS for certain specific samples. "During the process of collecting data for an investigation...the ...author encountered a number of difficulties in the administration of the SDLRS" (p. 15). After an investigation of these methodological and substantive problems, Brockett concluded that the SDLRS is

a highly reliable, but not necessarily valid diagnostic

device for all samples.

> Self-directed learning readiness, as defined by
> the SDLRS, is very much oriented toward learning
> through books and schooling...earlier studies
> have generally reported samples of college
> students and adults with at least a high school
> education. For these groups, the SDLRS has been
> demonstrated to be an appropriate instrument.
> (p. 21)

Thus, adult educators generally agree that

facilitating increased readiness for self-directed learning

is an important learner outcome. The research in self-

directed learning readiness has led to the development of a

reliable diagnostic scale, the SDLRS, which has been used

with samples of adult learners who have had experience with

formal schooling and are oriented to learning through books

and libraries.

Teaching Style

A review of the literature on adult education

practices indicated an increasing interest in learning and

teaching styles and their implications for practitioners

(Brookfield, 1986, 1990; Conti, 1985a, 1989; Cross, 1976,

1981; Darkenwald & Merriam, 1982; Dressel & Marcus, 1982;

Even, 1982; Fourier, 1984; Holtzclaw, 1985; Hyman &

Roscott, 1984; James & Galbraith, 1985; Smith, 1982). The

term style is normally used to refer to both learning and

to teaching preferences. However, most of the literature

has dealt with learning styles rather than with teaching styles. "The educational literature most often uses the term learning style along with the recommendation that learning style be matched with teaching style so as to augment achievement" (Hyman & Roscott, 1984, p. 35). Usually the development of one or a variety of learning style conceptualizations follow a fairly simple four step process:

1. Examine the student's individual learning style.
2. Understand it and classify it according to several large categories.
3. Match it with a teaching style of an available teacher, or if no available teacher has the appropriate style then request that a teacher adjust his/her teaching style to match the students' learning style.
4. Teach teachers to do steps, 1, 2, and 3 in their pre-service and in-service training program. (p. 35)

However, the successful implementation of the above process requires that one knows which teaching styles are an appropriate match with a given learning style.

Of greater importance for practitioners in adult education is research which will isolate the student outcomes resulting from the practice of specific teaching styles. Only a few educators have identified a particular teaching style and recommended its use with an adult student population (Conti, 1985a, 1989; Dressel & Marcus, 1982; Hyman & Roscott, 1984).

While there has been a considerable amount of research on the subject of teaching/learning style, often much of the teaching style research is linked to learning style; however, the interest is in how the teacher's actions influence the students. Thus, it does educators little good to know what a teacher's personal style is; rather, one needs to know what is characteristic of how a teacher acts with learners when teaching. For example, what kinds of tasks do certain teachers select to use as teaching tools and how do the tasks selected effect the learning situation (Hyman & Roscott, 1984).

At least three educators (Conti, 1979; Dressel & Marcus, 1982; Hyman & Roscott, 1984) have developed a typological construct around the concept of teaching style. Based on discussions with teachers and educators, a typology of teaching styles was identified and developed into four teacher orientations:

1. In discipline-centered teaching, the content and structure of the discipline are rigidly determined and in no way modified to meet the requirements, needs, or special concerns of either the teacher or learner.
2. In instructor-centered teaching, the teacher is the expert and the main source of knowledge in both the particular subject matter and the discipline. The instructor, around whom all class activity revolves, is the focal point in the teaching-learning process. The student is a passive recipient rather than an active participant.
3. In student-centered cognitive teaching, intellectual development is held to be the most important outcome of the teaching-learning process. Both content and teaching

practices are selected and adjusted to
accommodate the cognitive growth of the
student toward teacher-specified objectives.

4. In student-centered affective teaching, the
personal and social development of the
student is the focus of the teaching-learning
process. Both the content and the teaching
practices are adjusted to foster the total
development of each individual. The
individual is expected to develop
idiosyncratically rather than to adapt to
content or to the demands of the teacher.
(Dressel & Marcus, 1982, p. 2)

The data were gathered from teachers' subjective

reactions to the various orientations when presented to

them for evaluation, from the meta-analysis of other

studies of teaching orientations, and from teacher rating

scales. This collection of descriptive material was used

to construct a typology of teacher behaviors which "should

prove useful as profiles of possible alternative teaching

styles" (Dressel & Marcus, 1982, p. 2).

The study emphasized that learning is the criterion of

effective teaching and that successful teaching must be

student-centered. "The success of teaching must then be

determined by whether and what the students learn, not by

what the teacher does" (Dressel & Marcus, 1982, p. 13).

Student-centered teaching may focus on either cognitive or

affective development or both. However, the authors stated

that cultivation of the intellect is the primary concern of

higher education. They doubted the validity of teaching

that stresses affective development to the detriment of the

cognitive domain. It is not that affective outcomes are

inappropriate in education. Rather, it is just that insight and self-realization are not a sufficient basis for granting credits or degrees. On the other hand, "pure cognitively oriented teaching is impossible" (p. 9). Complete separation of cognition and affect in actual teaching situations is artificial. This is true of all four dimensions of this typology of teaching styles.

> In fact, our observations and experiences to date with these four orientations suggest that most teachers fall athwart all four rather than into any one, and they may shift in emphasis from one to another as they deal with different content, course levels, and students. (p. 12)

Personal values underlie the teaching practices of instructors, and the concept of articulated teaching styles may hold promise for improving teaching. Unfortunately, teachers of adults in higher education are not usually trained to adjust to differences in students. Consequently, the conclusion reached in this study was that "the goal of teaching and learning is to make each learner as independent as possible" (Dressel & Marcus, 1982, p. 202) and recommended the student-centered cognitive approach as "the most appropriate for undergraduate college teachers in a democratic society" (p. 15).

In the conclusion of this study on teaching styles, the needs of adult students in higher education were addressed. It was stated that the desired outcome of education for adults is the acquisition of the skills for