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ABSTRACT

Open attitudes, dispositions, and values are the primary preconditions for learning for both adults and children. Unfortunately, schools do not provide a suitable environment for adult learning. Organizational roles of educators tend to undermine adult learning, and as teachers and administrators advance, they seem to exhibit even less need to learn. A study of students in two university preservice courses, one for aspiring teachers, the other for aspiring educational administrators, were used to better understand adult initial learning dispositions and to explore strategies for affecting those dispositions. Also, cognitive psychology, adult-learning theories, and action research were used in teaching activities to foster positive attitudes toward lifelong learning. Three categories of data were collected: professional commitment, lifelong learning, and reflection. Both groups were strongly committed to becoming teachers and administrators and were already making sacrifices toward that goal. Students had mixed feelings about the importance of college courses and the value of different teaching methods. Responses concerning learning, reflection, and self-evaluation changed for many of the participants during the course. Student response to the courses confirmed that re-educating aspiring educators in the process of learning is the best way universities can improve public education. (Contains 32 references.) (JPT)

Dispositions of aspiring teachers and administrators: Learning-in-action

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Dispositions of aspiring teachers and administrators: Learning-in-action

> Learning is "the greatest of pleasures not only to the philosopher, but also to the rest of mankind...." (Aristotle, Poetics, The basic works of Aristotle, (1970). Chapter 3, p. 1457. Richard McKeon (Ed). New York: Random House)

When cognitive researchers describe learning as a process (Bruner, 1960; Marzano et al., 1988; Marzano, 1992), they explicitly claim that the first stages or preconditions for learning reside in the open attitudes, dispositions, and values of the learner.[1] The claim is no less true for the adults than it is for children. Unfortunately, an environment conducive to adult learning is not self-evident within schools. Rather, organizational roles such as teacher and administrator, tend to subsume the importance of and preconditions for adult learning (Cross, 1988; Kushman, 1992). Moreover, as teachers and administrators move up the organizational ladder, they seem to exhibit even less need to learn (Fullan, 1982).

This study had two purposes: (1) to better understand initial learning dispositions of the adults who work or aspire to work in education; and, (2) to explore pedagogical strategies for transforming and sustaining learning and reflective learning dispositions. The sample populations for our study of learning dispositions were two university pre-service courses, one for aspiring teachers, the other for aspiring educational administrators. The objectives and methods were not solely to identify and label learning dispositions of aspirants, but also

to engage in pedagogical activities using cognitive psychology, adult learning theories, and action research methods to foster positive attitudes towards life-long learning within our profession. Bringing these three frameworks together challenged us as teacher educators to rethink not only what we were teaching, but also how we could teach better. We believe that by sustaining as well as transforming learning dispositions of individuals, we will be contributing to school improvement. According to Haberman (1991), reformers need to reconsider the issue of pedagogy because it is "sufficiently powerful to undermine the implementation of any reform effort" (p. 292). What is perplexing is why such issues of cognitive and adult learning dispositions have been missing from many of the proposals calling for school reform during the past decade.

Educational aspirants and their motivational dispositions

While there are ample demographic profiles of those entering the field of education at both the teaching and administrative stages (Adkison, 1985; Astin, 1982; 1983; Grady, et al., 1992; Lortie, 1975), our knowledge of deeper motivational attitudes is known primarily through inferential studies (Daniel & Ferrell, 1991; Daniel et al., 1992; Grady, et al., 1992). Some of the most common motivating themes related to aspiring teachers report that they like children, desire adequate income and security, seek favorable work hours and vacations, enjoy subject matter, want lifelong opportunity for learning, and can fulfill their service needs. The labels attached to these themes by Lortie

(1975, pp. 26-37) include needs for interpersonal relationships, service, material benefits, time compatibility, stimulation, and influence of others. Some of the motivating characteristics of aspiring administrators reported are financial [such as higher salary], opportunity to develop and enhance leadership ability and organization skills, altruistic people skills, and the desire for more challenge (Adkison, 1985; Grady, et al., 1992).

For both aspiring teachers and administrators, many of these motivational themes are not found in school practices. For example, teachers' desires for an interpersonal environment are too often unfulfilled as they find themselves isolated behind classroom doors. Their desire for time compatibility is often compromised by their need to earn more money during vacation times or after school. Disparities between motivational themes and school reality are apparent for aspiring administrators. The administrative aspirants studied by Grady, et al., 1992 perceived the school administrator as an "overseer" who "assures smooth and efficient operation of school" and "manages discipline" (p. 451). Very few aspiring administrators mentioned the role of leadership or used the word "vision." Little or no understanding of the complexities, ambiguities, and dilemmas inherent in all phases of education, be it teaching, learning, or administering, is evident from the stated motivational themes of the majority of educational aspirants. Thus, unless there is a planned effort to engage students in the realities of today's schools and in their own learning needs, we should not expect any real improvement

within schools. We must find ways to teach aspirants how to discover for themselves what works. While motivational attitudes may be the "most important characteristic of the inquiry environment" (Postman & Weingartner, 1969), from our perspective, a deeper understanding of learning dispositions on the part of both teacher educators and aspirants is needed to unleash the talents of educators. Towards that objective, we sought to explicitly incorporate into our teaching and research three theoretical frameworks: cognitive learning processes, adult education theories, and action research.

Theoretical Assumptions

For most of this century, our views on learning dispositions were strongly influenced by behaviorist studies in psychology emphasizing stimulus-response interactions. Less attention has been given to internal processes related to cognitive psychology (Bruner, 1960; Posner, 1982), dimensions of learning (Dewey, 1897/1991; Marzano, et al., 1988; Marzano, 1992), adult learning theories (Knowles, 1968; 1970) and, change theory (Benne, Bennis, & Chin, 1985). For years, behaviorism and content-specific objectives have held learning hostage to stimulus-response mechanisms and blank slate assumptions, while ignoring the internal processes going on within consciousness (Posner, 1982). Teachers, texts, and hierarchical structures have held sway over individuals' active participation in learning processes.

Pedagogical assumptions are still dominated by the beliefs that it is sufficient to simply provide information, theoretical

or experiential, in a linear format. The tabla rasa mind passively awaits this new knowledge (Locke, 1690/1959). Although professional knowledge bases for teachers and administrators are demonstrably more complex (Argyris & Schon, 1982; Daresh, 1992; Dewey, 1897/1991; Schon, 1983; Tom & Valli, 1990), good performance, as Maxcey (1992) notes, is still often viewed as a matter of technical know-how.

One reason why technical proficiency continues to hold a dominant position is that the discussions of professional knowledge bases are presented as competing epistemologies: reflective practice, critical theory, action science, among others, each with its own army of normal science practitioners (Kuhn 1970). More attention is given to teasing out normative differences and establishing paradigmatic status, rather than to establishing pragmatic and pedagogical linkages. Seemingly lost in these academic debates is the pedagogical glue which could be used to hold the competing epistemologies together. Foremost in our minds is the pedagogical goal of learning how to learn, a central tenet of all professional education epistemologies.

Learning how to learn as a central goal of education has been an integral part of cognitive research, adult learning theories, and action research change theories. Within the cognitive tradition, the emphasis is on internal processes which lead to learning how to learn. For example, Bruner (1960) identified four cognitive themes: the need to understand structure of subjects (i.e., how things are related to whatever

subject in a meaningful way) as opposed to facts or techniques (p. 7); readiness for learning; intuition (i.e., Dewey's tentative formulations), and "the desire to learn and how it may be stimulated" (p. 14). Marzano (1992) linked five learning dimensions to education: positive attitudes and perceptions about learning; learning as a highly interactive process (i.e., "integrating information with what we already know to create new knowledge" (p.5)); extending and refining new knowledge; using knowledge meaningfully; and developing productive habits of mind. In both schemas, the essential precondition for learning begins with the learners' initial dispositions.

Adult learning theories, too, are concerned with learning how to learn. What primarily distinguishes adult learning from that of children is that the effects of previous learning and prior experiences are more pronounced and must be honestly addressed in adult learning settings (Freire, 1973; Knowles, 1990). Common practice, however, presumes (1) that learners lack experience and knowledge and (2) that application of ideas must be postponed. It is as if the learners are not ready to implement into practice the ideas which are being taught. In contrast, adult learning is self-directing, based on previous experience, immediately useful, and directly linked to understanding social situations and problems (Knowles, 1968). By diagnosing the initial dispositions of adult learners through data collection and engagement of aspirants, re-educative strategies, i.e., changing attitudes, within the limited setting

of a university class, can occur under the umbrella framework called action research.

Our understanding of both dispositions and change was influenced by change theorists who argued that change proceeds from surface level substitutions and alterations to deeper levels of restructuring and value reorientations (Benne, Bennis, & Chin, 1985). Changing previously held and deeply ingrained learning patterns, whether for adults or younger persons, requires engaging in difficult re-educative strategies. It takes an extraordinary effort and diligence to insure that learning is continually and appropriately applied to the daily lives of individuals in educational organizations.

Lewin (see Benne, 1985) emphasized action research as a change strategy, a process of participation, and as learning how to learn (Schein & Benne, 1985). The premise was never that more knowledge and skills would make for better practice [either as teacher or administrator]; rather, the focus was on changing attitudes and values that are part of the domain of problems. Figure 1 outlines the integration of cognitive and affective learning with adult theories and action research.

[insert Figure 1 about here]

A Learning-in-Action Research Design

An action research approach looks at attitudes and behaviors from a descriptive perspective only as a first stage in designing strategies for change. According to Posner (1982), there is a need to determine "beliefs, consciousness, development, emotions,

interactions, performance, and culture" (p. 122). The importance attached to initial dispositions is increased when individuals are "unfrozen;" that is, individuals need a reason to sustain their new judgments (Benne, 1985, p. 282), else they tend to revert back to old patterns of behavior. Thus, the first task in developing an action plan to guide pedagogical strategies was to identify the dispositions brought into the classroom.

The second task was to implement the pedagogical strategies in response to individuals in such a way as to influence their learning dispositions towards a more active involvement. To accomplish this objective, no one approach or epistemological tradition was selected a priori. Feedback information had to be incorporated into our thinking, planning, and action. The feedback information was obtained from multiple sources: pre- and post-test surveys, individual interviews with all aspirants, reflective practice discussion in class, observations of student responses to the variety of instructional strategies, informal meetings with students, and feedback sessions between the researchers, one of whom taught the class, the other a learning specialist-consultant. Figure 2 depicts the learning-in-action design.

[Insert Figure 2 about here]

Guiding Pedagogical Principles

At the heart of the technical know-how paradigm lies the erroneous assumption that there is a direct path already known to a few along which successful practice can be assured. This

assumption creates an expectation for professional learning through teacher and text. If one attends to these authorities, that path will be sufficiently explained to them. The idea of a single path supports a passive attitude towards learning. In contrast, our pedagogical objective was to replace the idea of a one best path as well as the passive and cognitive content learner with an active learning model, without completely removing the underpinnings and student expectations of traditional previous classroom experiences.

The re-educative strategies used in this study cannot be described as a teaching method. Instead, we can only outline the guiding principles which influenced our decisions in planning classroom activities and during the act of teaching. The following principles convey our approach to teaching and action research:

> (1) to share what we were learning with our students; within class we would reflect on what was happening or had happened in the previous class almost as often as we initiated content discussions;
>
> (2) to incorporate what people were feeling and thinking into the lessons;
>
> (3) to listen to even the smallest detail or trivial comment and take it seriously as perhaps indicative of something larger which was not said out loud;
>
> (4) to offer sufficient content and information on each topic so that students would not be asked to "move" (Benne, 1985) before they were ready;
>
> (5) to teach students how to collect information and help them decide how to use it;
>
> (6) to contrast previous experiences with conflicting information; to push students to use new information, not just recycle old information;

(7) to provide students with real field-based assignments to help them reconstruct their own realities;

(8) to confront the postponing of using information for some future time; that is, to encourage students to take immediate action on the newly acquired information;

(9) to be critical of current practices without being perceived as always negative, especially towards current practitioners as people;

(10) to establish that people were the basic unit of analysis as opposed to blaming structure or bureaucracy or organizational role players;

(11) to test the usefulness of theories as solutions to real problems [e.g., case studies], not just as subject matter needed to pass a section of a certifying exam [e.g., NTE];

(12) to present historical antecedents as philosophically alive [e.g. discussing the purposes of public education];

(13) to facilitate students' self-analysis and questioning as to why become/pursue the course of study as an educator

(14) to instill a feeling in students that the university classroom was a safe place to discuss their ideas;

(15) to make students question the instructor's behaviors, especially when the behaviors deliberately mirrored what students gua teachers and administrators do [would do] to students in their own classes;

(16) to offer each student opportunities for one-on-one interaction;

(17) to expect students to collect and analyze data on their own terms within their own immediate context;

(18) to remind students of the temporary nature of this course, but at the same time ask them how they intended to keep the "spirit" alive in other future contexts;

(19) to contrast rearview mirror thinking (McLuhan's metaphor cited in Postman & Weingartner, 1969) with critical analyses of current practices which challenged students' perceptions, beliefs, and ways of thinking; and

(20) to simulate, as much as possible, actual teaching and administrative learning environments; that is, how it feels to be in front of the room teaching; how it feels to experience decisional stress, role ambiguity, work overload,

and discretionary choices and dilemmas (Clark & Astuto, 1988).

Research Questions

The specific research questions in this study were derived from the reviews of literature and the learning-in-action research design. We wanted to know: (1) What are the learning dispositions of aspiring educators; (2) is there a difference in the initial learning dispositions between aspiring teachers and aspiring administrators; and, (3) which specific learning dispositions of the two groups were most amendable to changes within a university classroom instructional context. The answers to these questions are not straightforward, but the theoretical framework based on cognitive learning, adult learning, and action research offers some broad synthesis categories for data analyses of attitudes and behaviors. These are discussed below in the section on data analysis. In addition, one noteworthy delimitation needs mention here. The university class context does not address professional learning which presumably occurs at other career stages of educators, such as during internships, induction, in-service, or at mid- and late career stages. Future studies in these other professional learning contexts are needed.

Participants

Two sample student populations were studied (see Table 1 below): aspiring teachers (n=26) and aspiring administrators (n=18), both of whom were enrolled in university courses at a large, urban state university. Both courses were required for professional certification in teaching and administration and

were taught by the same instructor. The undergraduate course was in the Foundations of Education, which does not address subject-matter specialization or teaching methods. The graduate administration course was titled, the Principalship, and it, too, reflected broader social and educational issues, rather than technical expertise in school business management.

[Insert Table 1 about here]

The instructor assumed a variety of roles: researcher, change agent, and learner. It may be significant to note that the instructor was a professor in a department of Educational Leadership, and, therefore, by academic training and professional experience as a former administrator, viewed educational reform issues within a broader context than classroom instruction or school management. Both groups were treated the same in regard to their future role as life-long learners and model educators in society. This message was conveyed through parallel learning activities which were described in the syllabi. In writing the syllabi, an deliberate attempt was made to structure parallel activities/topics in both classes. For example, each class had a panel discussion (passive listening to experts), a book fair (i.e., outside reading of book and classroom presentation), library assignments (e.g, an annotated bibliography), field work (i.e., learning about new/old situations through a theoretical framework), lectures (i.e., to meet learning expectations/ content needs of students and subject matter), discussions, group work, role playing, etc. In addition, on the first day of class,

the instructor announced that research would be conducted using the class, focusing on both the instructor's and students' behaviors as data. Not only would students be expected to learn and demonstrate their learning, but so, too, would the instructor be accountable for demonstrating what he was learning.

During the first class, the instructor introduced the learning specialist who would be collaborating as interviewer, researcher, and active learner. The students in both courses were told that her role was to facilitate learning on the part of the instructor and the students. She would collect and analyze data, through surveys and interviews, and offer feedback to the instructor to help him decide how to be more responsive to students' learning needs. All students were interviewed in one-on-one sessions with the learning specialists who acted as a reflective listener to the students, at times interpreting what was happening in class or expected from an assignment, reassuring students that they were on the right track, encouraging them to speak with the instructor about a problem, and at times also acting as an active change agent -- with her own collaborative agenda to help everyone involved to learn. She played similar interpretive, reassuring, and therapeutic change agent roles with the instructor during feedback sessions. She maintained student confidentiality if requested to do so.

For the learning specialist, these interview sessions evolved into her active participation in the students' learning activities and change process. She got to know many of the

students better than the instructor did, and had the opportunity and ability to be instrumental in their evolving as more reflective learners [or not, as the case may be]. Perhaps because she did not have the power of the grade, students revealed personal information that the instructor would not typically have access to. In difficult situations, the learning specialist would refer students back to the instructor; but, the students typically asked for her opinion about what they should or should not do about the problem.

Data Collection and Instrumentation

Multiple research methods were used to collect and analyze the continuous flow of interactional data among all of the participants. Both quantitative [pre- and post-test surveys] and qualitative [interviews (N=36), classroom observations, out of class conversations] data were collected. The former measured the initial learning dispositions of both groups as well as post-test changes in dispositions. The interviews monitored continuous changes in attitudes and behaviors [growth and development] growth] about the class and their attitudes towards learning and reflection. The qualitative data were continuously analyzed and used to initiate classroom discussions or to modify the learning activities.

All of the learning-specialist-student interviews were held during class time and scheduled on three dates during the semester. Beginning with the third class session, approximately six students per class were interviewed. On the very rare

occasion where a student preferred to remain in class rather than leave to be interviewed, we would reschedule the interview for another session. The same set of questions were used for all interviews throughout the semester. Active listening techniques [i.e., tell me more, repeating their responses, requests for clarification, etc.] were used by the interviewer. There was no time limit set for the interviews [they ranged from 15 to 40 minutes].

The goal of the interviews was to elicit as much and as thoughtful information about the class and the student as possible. Through such questions as: "What activities have been most useful to you?" "If you could change the course, what would you do?" How will you be a different kind of teacher/administrator as a result of what is happening in class?" "How have you changed your ideas about what the job of teacher/administrator is as a result of this course?" we encouraged students to be more reflective. Students frequently said, in response to a question, "I hadn't really thought about that before, but now that you ask me...".

What was done in and out of class was always subject to question. The intent of the data collection were not to measure mastery of content, but rather to continually assess the mediums of inquiry. Feedback data were collected after each learning activity, often leading to behavioral changes in subsequent informal interactions and class lessons.

Measurable Learning Variables

The survey and interview instruments measured items related to learning styles, proclivity for lifelong learning, commitment to career, level of self reflection, perceived strength and weaknesses, perceived intelligence and creativity, students' expectations for the courses and professor, their prior experiences, outside support and obstacles, and reasons for choosing their career. Based on a synthesis of the theoretical research assumptions of cognitive learning processes, adult learning theories, and change theory, these items were categorized under three broad topics: (1) commitment to the future profession, (2) lifelong learning, and (3) reflection. In order to compare and contrast the two groups of aspirants, demographic information was collected on age, gender, race, size of household, SES, previous experiences, highest educational degree, and academic backgrounds.

Under the first category, commitment to the profession, we analyzed the following items: prior experiences, reasons for choosing their career, current and future sacrifices, barriers, and plans to overcome barriers. Under the second category, lifelong learning, we analyzed learning styles, memory, learning preferences through theory or experiences, prior experiences as preparation, expectations for the course and professor, and the need to learn skills. Under the third variable, reflection, we grouped level of self-reflection, willingness to listen to others, thinking before acting, perceived strengths and

weaknesses, perceived intelligence, and perceived creativity.

Data Analyses

Three data analyses were conducted on the survey data: at the beginning of the semester, pre-test data were analyzed to assess the initial learning dispositions of each group; at the end of the semester long project, pre- and post-test differences were measured to see within group changes; lastly, between group post-test differences were also measured. The open-ended survey items were analyzed by the frequency of responses, percentages, and Chi Square differences. Interval data survey items were analyzed with inferential statistics.

Interview data were analyzed throughout the action research project by the learning specialist. After each interview session, the learning specialist met with the instructor to share information. The learning specialist read responses to the instructor, and the instructor described what he felt was taking place in class. The information was discussed in light of (1) what adjustments should be made to the course activities to assist students in their continuing reflection about their learning; and (2) what ways that the instructor could address the concerns and problems that individual students were experiencing that were holding them back. The information was presented as feedback data to the instructor who in turn incorporated the findings into classroom discussions and/or behavioral changes inside and out of the classroom.

Findings

The data used in understanding the initial learning dispositions of educational aspirants, their changes, as well as linking pedagogical actions which contributed to such changes came from the multiple data sources: survey responses, classroom observations and discussions, informal discussion, and interview sessions. For purposes of analysis, we have categorized the data into three broad topics derived from cognitive psychology, adult learning, and action research: professional commitment; lifelong learning; and reflection. The next two sections report findings about initial learning dispositions of the two aspirant groups followed by descriptions of observed changes in their learning dispositions. In the discussion section, we discuss the observed changes in terms of the learning-in-action methods within the specific university context.

Initial learning dispositions:

Commitment: Both groups of aspirants stated that they were strongly committed to becoming teachers and administrators, and were already making sacrifices in terms of money and loss of personal and family time. Included among the sacrifices for aspiring administrators was their current, full-time classroom teaching job. Three quarters of the aspiring administrators said they would remain teachers if they did not become administrators. In contrast, almost 50 percent of the aspiring teachers said they would leave the field of education if they did not become teachers. Nevertheless, 81 percent of the aspiring teachers

reported that they want only to be teachers and do not, at this early stage, aspire to administrative positions.

When aspirants were asked about future sacrifices and barriers, aspiring teachers again listed money. Money, however, disappeared from the aspiring administrators' list of future sacrifices. Thus, the issue of money went from being perceived as a sacrifice to becoming a motivator for aspiring administrators. Aspiring administrators' responses to questions about barriers to fulfilling future plans were influenced by the future availability of positions and their perception the role of politics might play in the selection process. A majority from both groups said, however, that they had a plan to overcome whatever barriers they encountered.

A majority of aspiring teachers said that they would reach their goal of becoming teachers in four years. The timeframe for aspiring administrators was far more variable, ranging from one to more than 10 years. Unlike teachers who gauged their timeframe in terms of a prescribed sequence of teacher education coursework followed by job expectation, aspiring administrators perceive a different reality. Some enroll in an administration certificate program without a job prospect in mind, while others take the courses so that they may quickly assume a waiting position. Adkison's 1985 study of aspirants within an urban school district felt they would be administrators within five years.

Learning: Initially, aspiring administrators expressed a

negative attitude [55% responded "somewhat relevant" to "not relevant"] towards the relevancy of college coursework in comparison to learning from professional practice. The percentage was reversed for aspiring teachers; 55 percent initially responded "relevant" or "very relevant" to college coursework. A higher percentage of aspiring administrators tended to favor learning by doing and learning from experience as compared to aspiring teachers [39% versus 25%]. Nevertheless, both groups agreed that a combination of learning strategies, theory and practice, was best for them. The relationship between learning about and learning how indicated that the initial dispositions of aspiring administrators were split between the two paradigms, whereas aspiring teachers tended to slightly favor learning about. Regardless of aspirants' views of relevancy or learning style, very high percentages of both aspiring administrators and teachers preferred to come to class instead of staying home and reading the course material [82% and 86%, respectively].

While we might conclude that school attendance has a strong attraction for educators, we also found aspirants in both groups who did not like to learn in any of the formats we presented in class. They complained openly and often about the amount of work and types of assignments -- even when given choices in both areas.

In applying the adult education concept of previous experiences, aspiring administrators listed teaching and

supervising as their most important previous experiences, while aspiring teachers listed caring for children and family in this category. Although both groups believed these experiences to be important to their new learning, aspiring administrators gave greater influence to their previous within-school experiences. For whatever reasons, aspirants' previous experiences as students themselves were never mentioned in any of the responses regarding valuable previous experiences.

Another initial learning difference was reported as how important ideas are remembered. Aspiring administrators said they link ideas with what they already know; while, aspiring teachers stated that they rely on their memory to remember. Both groups defined important ideas as ideas which are personally relevant and valued the need to learn specific skills. Practically all aspirants said they underlined important ideas. Aspiring administrators said they did not outline chapters, while aspiring teachers were equally split on chapter outlining. One disturbing response related to learning was that a majority of both groups of aspirants said they procrastinated in doing and handing in work.

Reflection: Most of the items grouped under the reflection category asked aspirants to rate themselves on a Likert-type scale [one (low) to seven (high)]. Other items simply asked respondents to list their characteristics [e.g., strengths and weaknesses]. The self-reported strengths of aspiring administrators included people skills, fairness, and being well-

organized. Aspiring teachers mentioned empathy, loving kids, and determination. Most aspiring administrators listed only one weakness, either their strong will, lack of patience, or their dislike of confrontation. Aspiring teachers listed two or three weaknesses, but the fear of their not being able to cope with discipline problems and their perception that they will not like working within a "formal system" were common themes.

Both groups were asked to rate their own intelligence level: 78 percent of aspiring administrators rated themselves from "average" to "above average." Most aspiring teachers said they were "above average." Creativity and stress were also measured on a one to seven Likert-scale. Most of the aspirants in both groups rated themselves at five or higher for being creative and either a 6 or 7 for being able to handle stress.

When asked how long it takes to become "very good" at their future profession, 31 percent in both groups of aspirants said "less than five years." The biggest difference between the two groups initially was that aspiring teachers' opinions varied more than those of aspiring administrators. The latter tended to perceive becoming very good in a shorter overall timeframe.

When both groups were asked about their enjoyment of reflection, there was a significant difference regarding reflection in favor of aspiring administrators. Based on the learning differences cited about, we can infer that aspiring administrators tend to reflect more on learning how (i.e., practice), whereas aspiring teachers do not tend to reflect as

much on learning about (i.e., theory).

Changes in Dispositions

Changes in learning dispositions were not only evident on post-test surveys, but also in the statements made by the applications during their interview sessions with the learning specialist. Both responses are integrated into the following narratives using the same categories of commitment, life-long learning, and reflection.

Commitment: Most aspiring teachers come with very limited previous experiences in education. Thus, their commitment tends to be shaped by these narrow parameters. When they are deliberately exposed to new experiences we recorded the following changes: "I didn't want to visit a public school, but once I did, I was really impressed by what I saw." "Now I realize I could feel something for children who are different from me. I was very nervous about this before." Aspiring teachers who initially expressed an interest in private schools, and who then spent some time within the public school system, switched their preferences. Others moved in the opposite direction; but in every change they could attribute it to their experiences in the course.

Based on interview responses, aspiring administrators confessed that their views of what administrators' do had changed as a result of the course. Prior, they saw administrative work as "sitting behind the desk in an office;" now they began to understand not only what was going on inside the office, but also all of the out-of-office work that was involved. They changed

their views of administration as far as being more complex than they had imagined or had casually observed. This more realistic view may account for a slight drop [i.e., from 83% to 72%] in the number of aspiring administrators who wanted to become administrators.

At the same time the percentages of aspiring administrators who at the end of the course said they "can have a positive effect on those who fundamentally disagree with [them]" went from 24 percent on the pre-test to 69 percent on the post-test. There were no changes in this area for aspiring teachers. Yet, when we compared aspiring teachers pre- and post-test responses to the question, "Are leaders born?" there was a significant change, the majority which initially responded "yes," now responded "no."

Learning: One comment from an aspiring teacher was that "since the course, I've started watching all the shows on PBS about education. I've learned, as teachers, we can never stop learning." The aspiring teachers found much of the information they were learning to be "new," and seemed genuinely excited about looking at things in a different way. "You couldn't get this from a book--the human interaction is what is stimulating." A statistically significant change occurred with respect to aspiring administrators' views about learning from experience only. At the beginning, aspiring administrators often said, "that's just the way things are done in my school." Later in the semester, they talked about how the course offered them a new perspective on what they knew. "The way it [i.e., content] is

presented is new -- it makes you think about how to use it to be a better administrator." A large part of becoming a better administrator lies with the students' understanding and acceptance of the complexity of school administration.

One of the most significant changes for the group of aspiring administrators had to do with their perceptions of the university coursework as relevant in comparison to professional practice. By the end of the semester, 85 percent of aspiring administrators rated the course as either "very relevant" or "relevant." In fact, the "very relevant" responses increased from an n=4 to n=12. The shift in course relevancy was less dramatic for the aspiring teachers, from 56 percent who initially said college course was either "relevant" or "very relevant" to the post-test percentage of 81%.

One area in which aspiring teachers demonstrated more change than did the aspiring administrators was in their views of college instructors. Initially, the former group had no specific preferences as to the kind of professor they wanted; however, by the end of the course aspiring teachers tended to agree with aspiring administrators in preferring instructors who facilitated students' discussions. Both groups' attitudes towards college instructors became positive vis a vis knowledge of practitioners in the field. Instead of a response based on a yes-no dichotomy, aspiring administrators shifted their attitudes to an "it depends" stance regarding college instructors' knowledge of education. Because the coursework emphasized the integration of

theory and practice of administration, the graying of their responses was viewed by the researchers as positive.

Reflection: Our impression from the interviews was that the majority of participants in both groups became more reflective during the semester as a result of the way the course was being taught. As one aspiring teacher noted, "The more I learn, the more questions I have." In fact, aspiring teachers tended to respond more positively to in-class reflective discussions than did aspiring administrators. The former saw these discussions as directly relevant to their future role as teachers. Aspiring administrators were more impatient with reflection on classroom learning. They exhibited a more practical, action orientation, and preferred not to think about meta-level processes. They expressed their desire for more direct instruction in two ways: "Just tell me what I need to read/do/know;" and "Either you have it or not."

To the question, "How long it takes to become "very good" at their future profession?" there as a significant pre- and post-test difference for aspiring administrators, but not for aspiring teachers. The changes occurred, however, only for those who initially had said, "It depends." Their post-test response shifted to "a lifetime." For those who said "less than five years," they held to their view. We conclude that the frequent class discussions of administrative complexity and dilemmas had an effect only on those who were "ready" to hear this message. Although there were not significant changes in the views of

aspiring teachers, a number of the comments reflected the following shift: "Now I realize I have a long way to go before I'm good in the classroom. Before I thought it took one year, but now I know."

Conclusions

The deliberate inclusion of cognitive and adult learning theories and action research methods through the guiding pedagogical principles resulted in a unique collaborative learning experience for the students, professor, and the learning specialist. In shifting from a direct instruction, lecture and discussion method to students working together in groups, doing and sharing their own original exploratory research, and contributing to the content and learning activities in the class, the study required more openness and mutual respect than in traditional classes. We found that active learning activities which challenge students' prior knowledge and experiences can lead to changes in dispositions related to becoming more committed to the profession, dedicated to learning, and being more reflective. "I'm upset all the time because I'm losing control over my beliefs, but I think that's good." The university classroom activities changed students' perceptions of what teaching and administering actually entails.

The expectation that what we were learning and doing was transferable to everyone's current contexts, regardless of titles and roles, not only encouraged learning, but also openned up new possibilities for taking action. For example, one aspiring

administrator said that she has started to speak up more in school and take an active leadership role. She obviously decided not to wait until she was officially promoted to the role of administrator before she would assume responsibility for school improvement. The significance of such changes can be measured in terms of cognitive and adult learning theories: (a) self-directedness (b) immediacy.

We also found out more about adult environmental factors which were outside our classroom control. "I haven't been able to read much this semester because ..., but the discussions have moved me -- I'll eventually read the whole list." The number and kinds of sacrifices made by aspiring educators by race and gender need fuller exploration. We wonder what effect open discussions of sacrifices and barriers can have? The fact that many of the obstacles were common to all aspiring educators in this study suggests that such discussions can be brought into the classroom as relevant content, rather than pretending to leave such issues outside the door.

What we learned about aspirants raises a number of concerns for the profession. For example, although we found that money changed from being an obstacle to a motivator for aspiring administrators, we still do not know what role money [i.e., tuition and salary] plays in attracting quality aspirants. In addition, we can not say with any certainty what the overall effects are when aspiring administrators do not reach their goal of obtaining an administrative position, and then "choose" to

remain as teachers. Considering the sacrifices this group makes to become administrators, there remains a question about their future commitment and motivation to classroom teaching and learning. Moreover, what are the effects on society and education in losing aspiring teachers who fail to obtain teaching positions?

Although both groups voiced strong preferences for coming to class to learn, neither group of aspirants mentioned the role of student on their lists of valued previous experiences. When aspirants were asked how they remember important ideas, aspiring administrators said they linked new ideas to what they knew from experience, while aspiring teachers relied on their memories. This difference not only reflects the role played by experience in adult learning, but it also raises an important pedagogical question. That is, if aspiring teachers themselves view memory as the best way to remember important ideas, they just might pass that on to the next generation of school children. Aspiring teachers, when moving from the role of student to teacher with few life/learning experiences, are likely to reproduce their own learning patterns. Unless there are deliberate efforts to change the way aspiring teachers learn before they enter their own classrooms, they will simply replicate the inadequate learning methods they had received. No less troubling were the aspirants' acceptance of procrastinating behaviors when it comes to [school]work.

University courses can and should address the incongruities

between initial learning dispositions of aspirants and real life future practice. Based on this class, an aspiring teacher commented, "I am realizing what teachers do." In particular, aspiring teachers feared their inability to handle student discipline problems and their reluctance to work within a formally structured school system. While these fears are central issues within the school reform movement, they are not necessarily central curricular issues within teacher preparation programs. The long term separation between teacher education and school leadership reform has yet to be seriously addressed.

Likewise, in terms of theory-practice-previous experience incongruities, aspiring administrators told us, "Now I see the scope of the job differently;" "Before, I thought being a principal was like being a plant manager -- now I think it is more like being a politician;" "The job is not the way I thought it was -- I thought you just sat behind a desk and gave out orders -- now I know it's much more complex than that; " I thought I was ready to be a principal -- the course has shown me that I'm not;" "Now I know the job is whatever you make it."

Finally, in spite of the time, challenges, and difficulties involved in conducting this action research study on the part of all participants, the end of semester student evaluations of the instructor ranged from "positive" to "very positive." To do all this work, to simulate discussions on dilemmas, complexity, and stressful behaviors and attitudes, to take risks, and then not receive positive evaluations would dissuade even the most radical

and committed college instructor or school teacher from engaging in action research. Nevertheless, in our judgment, re-educating aspiring educators in the processes of learning is the best way universities can contribute to school improvement.

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Figure 1 Transforming and Sustaining Learning Dispositions

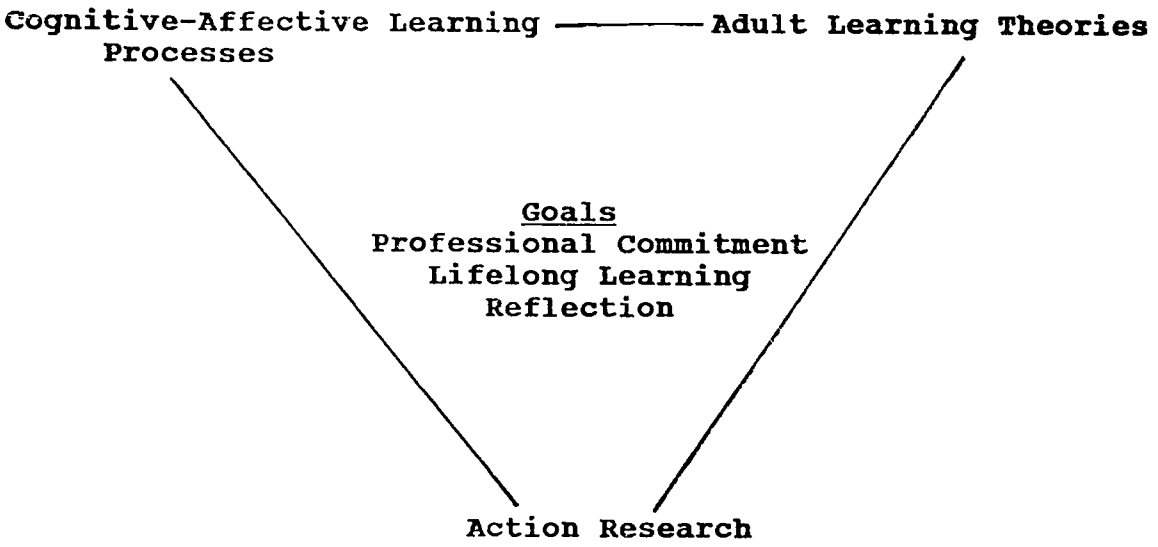

Figure 2 Action Research Design

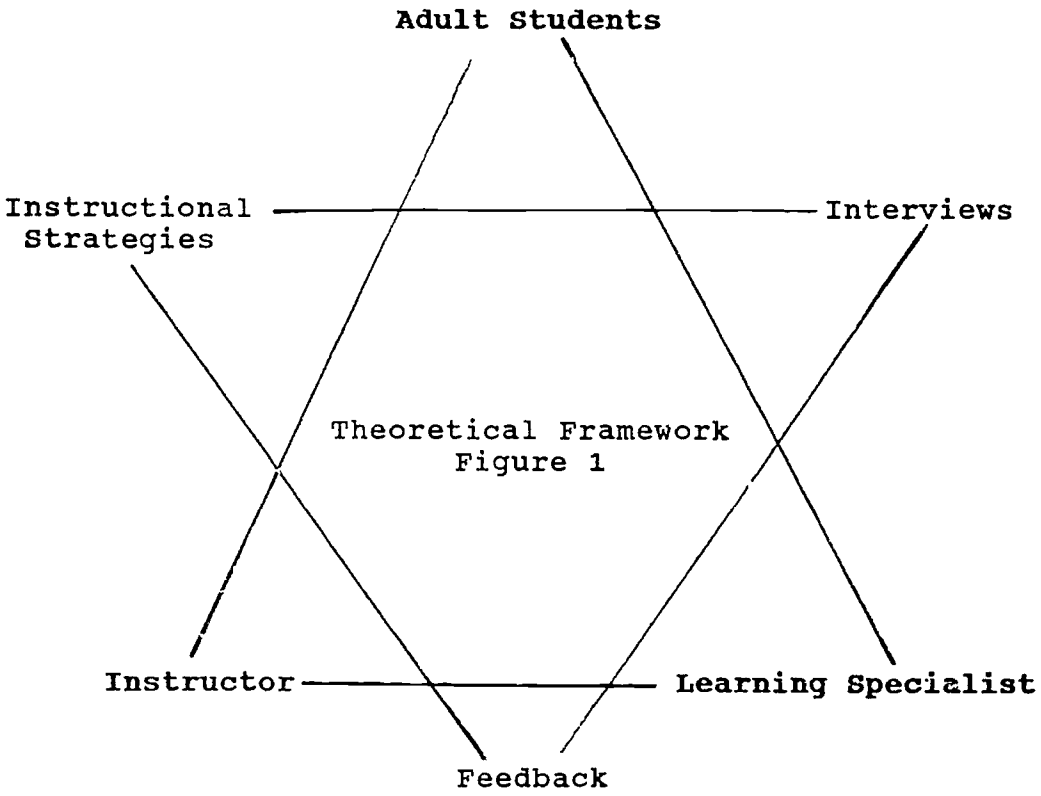

Table 1: Demographic Characteristics of Aspirants

	Age	Gender		Race		Household		Income
		M	F	B	W	adults	children	[mode]
Aspiring Teachers	30(n=26)	7	19	0	26	2	1.1	low-mid
Aspiring Principals	37(n=18)	5	13	13	5	2	1.6	mid-mid

ENDNOTE

1. The term "disposition" is used in the title and throughout the paper to indicate the first stage of learning, no more, no less, as in "... the fittest time for children to learn anything, is when their minds are in tune, and well disposed to it;..." (John Locke, Some thoughts concerning education, paragraph 75.) We are aware, however, that the term "dispositions" has other, more technical meanings with respect to learning.