Research conducted on Child Development Associate (CDA) training in HSS Region III during the past 2 years has attempted to analyze this form of adult education by combining some aspects of life-span research with aspects of more traditional adult education research. This report provides a brief update on two types of research: research on the impact of CDA training and research on the training process itself. Research on the effects of CDA training shows short term gains in child development knowledge and classroom behavior, but it also indicates that a partial reversal of earlier endorsement of child-centered beliefs takes place during second-year training. Two explanations are offered for the latter finding. The first concerns the emphasis during second-year training on teacher behavior as opposed to child development. The second, oriented in the life-span perspective, suggests reversion by most trainees to previously held beliefs. Three studies have been completed on the CDA training process. The findings of one study suggest that the CDA approach to assignments and inservice feedback should be combined with a child development knowledge base typical of traditional training. Results from another study emphasize the influence on training of external motivating factors in the work and personal lives of trainees. The third study concludes that the more successful training programs include opportunities for independence in working with complex materials in complex social interactions. (CB)
The Child Development Associate Program

Research Update

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Introduction

It has been argued that there is a critical need in the area of Child Development Associate training and in the field of adult education in general for an educational psychology of the adult learner (cf. Peters, Yenchko, & Sutton, 1981; Sutton & Peters, 1983; Willis, in press). The argument also stresses that such an educational psychology is best founded in a life-span developmental perspective. The life-span perspective considers life-long learning as an adaptive process that continues throughout adulthood (Cropley, 1977; Schaie & Willis, 1978, 1982) and points to the self-determined and self-directed nature of much adult learning and the diversity of contexts in which it occurs. Researchers who adopt the life-span perspective in their research on adult education pay particular attention to the motivational aspects of certain educational strategies and methods (Peters & Kostelnik, 1981) and to the interrelationship of adult personal and professional development (Peters, 1982; Sutton & Peters, 1983). This contrasts sharply with more traditional kinds of research in adult education where the attempt has been to investigate the relative contributions of such variables as sponsorship, methods (e.g., lecture, discussions,
role playing, etc.), or the conditions of training (e.g., days vs. night classes) to the outcomes of the educational program (cf. Peck & Tucker, 1973; Schaefer & Law, 1973).

Both lines of research have their virtues and limitations. The first line has too frequently either (a) provided only descriptive characteristics of adult learners or (b) intervened only under limited laboratory conditions. The second line of research has wrestled with a virtually limitless set of potentially important variables without a theoretical rationale for selecting specific ones for study. Further, attempts to analyze the vast number of potential variables for their impact under "real world" conditions have been hampered by the inseparable nature of some of the clusters making it impossible to separate the wheat from the chaff.

Research conducted on CDA training in HSS Region III during the past two years has attempted a more systematic effort combining some aspects of life-span research with other aspects of more traditional adult education research. My students and I, working with limited resources but excellent cooperation from CDA trainers and trainees, have sought to broaden our knowledge about CDA training, while at the same time gaining some useful insights about adult education and teacher development more generally. The purpose of this report is to provide a brief update on two types of research we have been doing.

Research on the Impact of CDA Training

Several studies confirm that the CDA training we have been providing produces at least short-term improvement in child
development knowledge and classroom behavior (Llewellyn, 1983; Prudhoe, 1983). These studies confirm the informal comments we have received over the years from trainees, trainers, education coordinators, and Head Start directors. They are reassuring confirmations of the research findings previously reported as well (Peters, 1982). Most interesting, however, is the longitudinal follow-up conducted by Rosemary Sutton.

As part of a larger study, some of which will be discussed later, Sutton administered the Teacher Belief Inventory (Verma & Peters, 1975) to a number of trainees. Nine of the trainees were ones from whom data had been gathered on two previous occasions, providing an excellent opportunity to look at change over a longitudinal period of 18 months. The results of her analyses indicate a complete replication of the trends we reported last year from analyses of first- versus second-year trainees. During the first year of training, there is a significant change toward the endorsement of the Head Start favored cognitively oriented, child-centered beliefs (from $\bar{x} = 44.2$ to $\bar{x} = 39.6$). During the second year of training, there is a partial reversal of this trend (CCB at Time 3, $\bar{x} = 51.1$; BTB at Time 3, $\bar{x} = 41.1$).

These data are explainable in two ways. First, the Year 1 versus Year 2 differences could be a reflection of the differences in emphasis of the two years of training. In some programs, the first year emphasizes the child development foundations of early education practice, while the second year attends more to methods, classroom management, and portfolio
building. The latter tend to focus one's attention more on what the teacher is doing and less on the child.

Alternatively, the life-span perspective (and our data) would tend to support another explanation. Given that the CDA trainees are an older and more experienced group, with many things going on in their personal lives, some of the second-year decline may be attributable to a reversion to previously held beliefs. This seems particularly true for the older among them (Sutton and Peters, 1983).

The trend is not alarming, and, indeed, there remains a significant increase in endorsement of cognitively oriented, child-centered beliefs from Time 1 to Time 3. However, it does suggest that additional supports for the initial changes need to be built into the training system.

Research on the Training Process

The second line of research we have undertaken seeks to differentiate critical aspects of the training process. Three studies have been completed to date.

The first study (Prudhoe, 1983) sought to investigate the general criticism directed at much of CDA training. Berk and Berson (1981), for example, have suggested that CDA training, because of the "narrow" skill focused assessment system toward which it is directed, underemphasizes the theory base that they claim to be an important and inseparable part of more traditional forms of teacher education. To test this claim and to determine whether the CDA training emphasis on the CDA 13 functional areas offered something importantly different to the
traditional training process, Prudhoe assigned 25 undergraduate students to one of three conditions. The first group received instruction and a student teaching experience in a manner that has been done traditionally at Penn State and elsewhere. The groups received information and materials on developmental theories and their applications in the early childhood classroom. In the classroom, the students received regular feedback from their supervising teacher. Prudhoe calls this the TRADITIONAL group.

The second condition was a CDA condition. This group received materials on the CDA competencies and functional areas. Classroom sessions were spent discussing the functional areas and how the students could demonstrate competency in the early childhood program. Students were also required to assemble a portfolio, and feedback on performance in the early childhood program was given regularly by the supervising teacher, using the 13 functional areas as a guide.

The third group of students received a slightly abbreviated version of the information and materials provided to BOTH of the other groups. The abbreviation was necessary so that this group would not receive more training time or assignments than the other two groups. They produced a portfolio and received regular feedback on their performance in the early childhood program, using the CDA Observation Check sheet as a guide.

Data on student performance was gathered, using an objective "knowledge" test and through observations of early childhood
classroom behavior, using the CDA checklist (Ruopp, Travers, Glantz, & Coelen, 1979).

The results of this study indicated that the students who received BOTH the CDA and traditional materials, information, assignments, and feedback did significantly better than the other two groups on the knowledge test and on the overall observed competency. The group receiving both forms of training was observed to be significantly better, particularly in the competency areas, Health and Cognitive. The other two groups did not differ from one another, though all students improved in skill and knowledge.

The findings of this small study suggest the virtue of combining the CDA approach with more traditional kinds of training. Of particular importance is the use of the CDA functional areas to focus assignments and supervising teachers' feedback and the need to integrate with such training the knowledge base of more traditional programs.

In the second study, Betsy Llewellyn (1983) sought to capitalize on the self-directed and self-determined nature of much of adult learning. She also sought to increase the "perceived relevance" of the CDA training by relating it to both the Head Start and home lives of the trainees. Llewellyn randomly assigned her trainees to conditions that varied by whether the trainees determined their own objectives for their training (by having them select particular functional areas to be stressed in Individual Educational Plans they wrote for themselves) and by the perceived relevance. Half her trainees...
had objectives and experiences that involved both their school life and their home life. Further, half her trainees used IEP's from the beginning of the year, while the other half did not initiate the IEP process until later. Hence, in her study, she could isolate the effects of the use of the IEP procedure, the effects of self-selection of functional areas to work on, and the effects of generalization to the home on the outcomes (both knowledge and observed classroom behaviors).

Her results indicated that there were significant changes in knowledge (as indicated by performance on classroom tests) and in skills (as indicated in Head Start classroom observations). However, these gains were uneven across functional areas and across the school year. None of the effects of her manipulated variables were significant. Llewellyn concluded that the commonalities of the training experiences received by all trainees and the external motivational factors in the work and personal lives overrode the effects of her experimental manipulations.

As disappointing as these results may seem, they do point out, again, the importance of understanding the full life context in which adult education takes place.

The final study was conducted by Rosemary Sutton (1983). This large study had several purposes, and the complexity of the findings warrants presentation in several different ways (one set of data has already been discussed above).

One of the purposes of Sutton's research was to develop a set of scales capable of going beyond the specifics of various
training programs and yet capturing the critical essence of the program that relates to training outcomes. Three dimensions of the educational environment were derived from the work of Kohn and Schooler (1983). These dimensions are: closeness of supervision, level of routinization, and substantive complexity of work with people, data, and things. I will present only some of Sutton's findings concerning these scales.

The final items of these scales offer a short but reliable and valid way of assessing these dimensions of CDA training programs.

These scales are important in two ways. First, the scales significantly discriminate between and among programs. That is, as perceived by the trainees, the closeness of supervision provided and the routine nature of the instruction differ from one program to another. Program differences on the complexity scale did not reach significance, but this scale was found to add an important dimension to the analysis.

Second, the dimensions relate significantly to critical outcome variables. Sutton reports that the less routine the classes were and the more complex the work required, the more intellectually flexible the students were. Further, the lower the complexity of work and the higher the level of routinization, the higher the level of traditional (teacher-centered) beliefs.

Sutton's findings strongly suggest that instructors should uniformly provide students with:
1. freedom to decide what they will do and how they will do it; decision-making opportunities throughout the instruction; and opportunities to get the pace of instruction;

2. variability (and some degree of unpredictability) in the way they conduct their classes and how they handle testing procedures;

3. opportunities for complex social interactions (discussion, group projects, peer tutoring) the instructors should require complex, higher levels or work with data (analyzing, applying, synthesizing, and evaluating).

Such program variables are related to desirable program outcomes.

Summary and Conclusions

The research reported here represents a systematic attempt to integrate research on the process and outcomes of CDA training with a life-span developmental perspective. It also represents the beginnings of an educational psychology of adult education. An educational psychology of adult education should provide guidance for program design and delivery. The research briefly summarized here does offer specific suggestions for the design, implementation, and improvement of CDA training programs.

The longitudinal study of the effects of training on the beliefs of trainees, confirmed prior findings that initial gains in cognitively oriented, child-centered beliefs show some decay during the second year of training. The process studies suggest areas where program change may have the potential for correcting this problem, while leading to other positive outcomes as well.
Clearly indicated is the continuous integration of the CDA functional areas as a basis of training, with the more traditional emphasis on theory and research as a basis for educational practice. Additionally, there is the need to continuously recognize the complex family and community context in which trainees live, work, and learn. Also, instructors should recognize the desirability of providing opportunities for having independence in working with complex material in complex social interactions.

Finally, there is obviously a need for much more research. The potential of the approach has been demonstrated. But, more and more generalizable research is required to build an adequate foundation for the continuing improvement of adult education and CDA training practice.
References


APPENDIX 1:
Dimensions of Educational Experience Questionnaire (DEEQ)
Dimensions of Educational Experience Questionnaire

We are interested in the things that you do as part of your CDA training. By this, we mean all the things that you do related to the training. These things may include taking classes in child development or classroom management, observations by your CDA trainer, home visits, or preparing your portfolio. We do not mean your regular job activities or Head Start inservice training unless it is part of your CDA training.

Please answer the following questions in relation to the CDA training you are currently in.

Part A

Circle the number that best represents your beliefs about your CDA training and instructor.

<table>
<thead>
<tr>
<th>Question</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
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</thead>
<tbody>
<tr>
<td>1. Who decides what topics or content are covered in your CDA training?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Who decides when certain topics or content are covered in your CDA training?</td>
<td></td>
<td></td>
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<tr>
<td>3. Who decides how certain topics or content are covered in CDA training (e.g., lecture versus discussion)?</td>
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<tr>
<td>4. Who decides what type of assignments or tests you have (e.g., multiple choice versus paper)?</td>
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<td>5. Who decides the topics or content of these assignments (e.g., topic of a paper)?</td>
<td></td>
<td></td>
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<tr>
<td>6. Who decides when certain assignments are due or tests are scheduled?</td>
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<tr>
<td>7. Who decides the speed at which you do your work in CDA training?</td>
<td></td>
<td></td>
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</tbody>
</table>
8. The instructor decides what the students do and how they do it.
   1  2  3  4  5

9. The instructor does not like us to disagree with him or her.
   1  2  3  4  5

10. The instructor allows the students the freedom to decide what they will do and how they will do it.
    1  2  3  4  5

11. What goes on in my CDA classes is unpredictable; unexpected things often come up.
    1  2  3  4  5

12. CDA training is routine as it involves doing the same thing over and over.
    1  2  3  4  5

13. When I come to a CDA class, I can predict what will happen that day.
    1  2  3  4  5

14. CDA training involves doing the same thing repeatedly.
    1  2  3  4  5

15. Does your CDA training involve doing different things or the same thing over and over?
    1. The same thing repeatedly
       2. Mostly the same thing
       3. The same thing in different ways
       4. Mostly different things
       5. Different things

16. How routine is your CDA training?
    1. Very routine
       2. Mostly routine
       3. Moderately routine
       4. A little routine
       5. Not at all routine

17. How much of your CDA training is predictable?
    1. All of it
       2. Most of it
       3. About half of it
       4. A little of it
       5. None of it

18. How much of your CDA training is routine?
    1. All of it
       2. Most of it
       3. About half of it
       4. A little of it
       5. None of it
19. How predictable are your classes in CDA training?

1. Very predictable
2. Quite predictable
3. Predictable about half the time
4. Not very predictable
5. Very unpredictable

20. How frequently have you done multiple choice, true/false, or short answer tests since August 1983 as part of your CDA training?

1. Never
2. Occasionally
3. Moderately
4. Frequently
5. Very frequently

21. How complex is your work in CDA training?

1. Very complex
2. Moderately complex
3. Somewhat complex
4. Not very complex
5. Not at all complex
Part B

We are particularly interested in the kinds of things you do in your CDA training related to reading and writing and dealing with people, and how much time you spend on each. We realize, of course, that you can be doing two of these at the same time.

First, dealing with people. Here we mean dealing with your instructor and other students in relation to your CDA training.

22. In an average week, how much time do you spend dealing with your instructor and other students in relation to your CDA training?

   ____________________________________________   ____________________________________________
   hours   minutes

23. We have listed below ways you might interact with your instructor and other students. We would like to know how frequently you do each. Please circle the number that best corresponds to your behavior.

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Occasionally</th>
<th>Moderately Often</th>
<th>Frequently</th>
<th>Very Frequent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Receive instructions or a lecture from your instructor by yourself or as one of a group.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(b) Class discussions.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(c) One-to-one discussion between you and your instructor.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(d) Informal out-of-class discussions with other students or teachers about things related to CDA training.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(e) Group projects where two or more of you in your CDA class have to cooperate and negotiate on a project.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>(f) Negotiation with your instructor where you jointly had to come to some agreement, e.g., about course requirements, or a topic of an assignment.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>(g) Teaching or peer-tutoring where you had to teach your whole CDA class, or tutor one of the members, on a topic related to CDA training.</td>
<td>1</td>
<td>2</td>
<td>3</td>
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<td>5</td>
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</tbody>
</table>

24. Which one of the seven categories listed above do you spend most time on?
Second, reading and writing. This includes all the reading and writing you do related to your CDA training.

25. In an average week, how much time do you spend reading and writing?

______________ hours _______________ minutes

26. We have listed below six categories of reading and writing you might do in relation to your CDA training. We would like to know how frequently you do each category. Please circle the number that best represents your behavior.

(a) Memorizing material or information, maybe for a test.

(b) Comprehending or interpreting what your instructor of the textbook says. This could involve reading your book, looking over your classnotes with the aim of trying to comprehend the material.

(c) Analyzing ideas, concepts, or theories. By this we mean you systematically try to break up the concepts (ideas or theories) into parts and consider each part and how they fit together.

(d) Applying the ideas or principles you have learned in class or from your textbook to your personal life, your job, or the outside world.

(e) Synthesizing different ideas, theories, or facts. That is, you try to see how different things fit together or can be combined.

(f) Evaluating or judging the worth of a theory, idea, or piece of research.

27. Which one of the six categories listed above do you spend most time on?
28. Is there anything else you would like to add about your CDA training?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Thank you so much for your cooperation