



4-1-1978

### Implications for teacher education as adult development

V. Lois Erickson

Jeanette Luise Eberhardy

Follow this and additional works at: <https://newprairiepress.org/edconsiderations>



Part of the [Higher Education Commons](#)



This work is licensed under a [Creative Commons Attribution-Noncommercial-Share Alike 4.0 License](#).

---

#### Recommended Citation

Erickson, V. Lois and Eberhardy, Jeanette Luise (1978) "Implications for teacher education as adult development," *Educational Considerations*: Vol. 5: No. 3. <https://doi.org/10.4148/0146-9282.1994>

This Article is brought to you for free and open access by New Prairie Press. It has been accepted for inclusion in Educational Considerations by an authorized administrator of New Prairie Press. For more information, please contact [cads@k-state.edu](mailto:cads@k-state.edu).

The authors believe that the issues addressed in this article will strongly impact the shape of integrated education in the future

# Implications for teacher education as adult development

by V. Lois Erickson and  
Jeanette Luise Eberhardy



V. Lois Erickson received her Ph.D. from Minnesota in educational psychology with a major in counseling psychology. She is an assistant professor in the Psychology in the Schools Training Programs and prepares graduate students in staff development and curriculum development models which deliberately promote psychological growth. Dr. Erickson received the 1976 National Research Award of the American Personnel and Guidance Association for her research on developmental curriculum.

Jeanette Luise Eberhardy completed a Master of Arts degree in Social Ecology at the University of California, Irvine. Presently, she is working for her doctorate in Educational Psychology at the University of Minnesota. The emphasis of her studies has been with the application of developmental theories to a variety of educational settings. She has been involved in a number of interventions and research projects in which the focus has been the personal and social development of college students.

"... Character begins to form  
at the first pinch of anxiety about ourselves..."

Yevgeny Yevtushenko  
There's Something I Often Notice

## Introduction

Throughout history major 'discoveries' can be identified which have instigated that 'first pinch of anxiety about ourselves' and triggered the growth of character. Freud reviewed some of these anxiety producers and their impact on the collective consciousness (Erikson, 1974). He identified the following 'disturbers of mankind's' sleep' and the resulting effects on the ego:

- Copernicus' discovery that the earth was not the center of the solar system as disturbing our sense of centrality,
- Darwin's theory of evolution as disturbing our sense of originality,
- Freud's own discovery of the unconscious as disturbing our sense of choice, and
- Einstein's concepts of relativity in the physical world as disturbing our sense of certainty.

We would add to this list the discovery within the last two decades of minorities, women and the handicapped as persons—as another disturber, that has jammed the prevailing sense of justice.

\* We can only assume that he meant 'womankind's' sleep was also disturbed.

The predominant conflict around the concept of justice that currently haunts our educational settings is the issue of mainstream education. The collective ego of the public is being forced to recognize that more just ways of educating handicapped students must be found. And, that students in regular classes also need to experience a more complex view of humanity. The incorporation of the handicapped child into the regular classroom addresses these issues.

The remainder of this paper will be presented in three sections: interpretations of the justice issue will be examined through current mainstream literature; the theoretical perspective of Lawrence Kohlberg for viewing conceptions of justice will be summarized; and a description will be given of a developmental teacher training program as one model for facilitating the adult growth process.

## Conceptualizing the problem: Excerpts from mainstream literature

The human rights movement, then, can be viewed as the most recent disturber of the 'collective consciousness' of humankind, and mainstream education as the most recent manifestation of the movement. In reviewing mainstream literature, we found that the common sociological interpretation of how norms of society are formed seemed to offer a helpful conceptual base for understanding the norms on justice. This interpretation would claim that people tend to organize their social lives through common norms that the majority follow, and that these norms determine how the majority define and conceptualize issues of justice. In the mainstreaming case, the particular norms that are now being challenged include the acceptance of homogeneous educational en-

vironments and the separation of handicapped children from the mainstream. Inherent in these norms is a devaluing of diversity. Morton and Hull (1976, p. 37) speak to the challenging of these norms:

"This is a yeasty time, a time of change for all involved in education. Educators, parents, children alike have an opportunity to foster and nurture movement towards a society that values people in all their diversity. But to find a philosophy of living which respects diversity along with the ability to implement it in the classroom is an unusual happening. The mainstream does not generally enjoy a happy reputation even for normal children. Moreover, respect for diversity is not an attitude encouraged by many public school systems. For the most part public schools are saturated with norm-oriented attitudes and with exclusionary tactics which spell trouble for children and even more trouble for their parents.

"To be sure, school systems cannot be accused of original sin; they merely reflect what the mainstream society believes, and we are a norm-oriented society much threatened by people who are different. Any newspaper will offer documentation of daily resistance to the heterogeneous grouping of people. If we cannot homogenize, if we cannot redesign people who do not conform, we will reach into our arsenal of exclusionary tactics and see to it that they are removed . . ."

Along with the strong questioning of the norms which have shaped our educational systems, we must also step back and ask, "Where have these norms taken us . . . What are the outcomes of such education?" Kenneth Keniston (1975, pp. 36-37) writes:

"Lately we have been accomplishing what I call the intellectualization of the child. I believe we are witnessing a growing emphasis upon the child as a brain; upon the cultivation of narrowly defined cognitive skills and abilities; and, above all, upon the creation, through our preschools and schools, a race of children whose values and progress are judged primarily by their capacity to do well on tests of intelligence, reading readiness or school achievement . . . We measure the success of schools, not by the human beings they promote, but by increases in reading scores . . . physical vitality, emotional caring, resourcefulness and moral commitment in the child are undercut."

Keniston's concern for "the human beings they promote" leads us to the most basic question, "What is the purpose of education?" In a thought-provoking paper, "Desegregation and Mainstreaming: A Case of *deja vu*," Chester Oden, Jr. (1976, p. 56), writes:

"Education is more than reading, writing and arithmetic; education is preparation for life. Students need more than facts and problem-solving skills; they need to know how to lead full and useful lives in a complex world. In a nation made up of a variety of races and nationalities, that means learning how to live and work with people of different skin colors and cultural backgrounds. If one accepts this broad view of education, one cannot imagine a worse way of undertaking it than in a classroom segregated by race, national origin, or handicappedness. Segregated classrooms deny millions of Americans the op-

portunity to become acquainted with the minority child whose future they share.

"A major objective for American public school education should be to provide multiple experiences for all children."

Surely, such multiple experiences through mainstreaming should lead to an education that promotes a deeper understanding of humanity. Morton and Hull (1976, p. 37) state:

"If we are asked to define what we feel is the goal of mainstreaming, we suggest that it should be a way of living that engenders respect for and acceptance of differences."

But, this "respect for and acceptance of differences" must first be a part of the maturity of adult educators.

In an insightful introductory statement to his book, **Shared Responsibility for Handicapped Students: Advocacy and Programming**, Philip H. Mann (1976, p. 9) writes:

"A measure of our professionalism as educators is our ability to serve children in a way that will not detract from their rights and dignity. Parenthetical to this involvement is society's need for specific services and the development of a relevant body of knowledge that relates to these expressed needs. Our professional responsibility then is to provide these services to individuals at every level of society in order to uplift mankind to a higher level of existence."

What this "higher level of existence" can mean will be determined by our perspective of the moral issues and how these issues are operationalized. New questioning and new information has brought us to a point in our history in which we are able to advance our ability to serve children. When we are able to incorporate more diversified and complex information into our decision making processes, we are then capable of making decisions which take into account the needs and rights of more individuals. We are then capable of acting in a more just way. Let us now examine a perspective which offers a means for conceptualizing the developmental growth of justice.

#### **A theoretical base for examining issues of mainstream education**

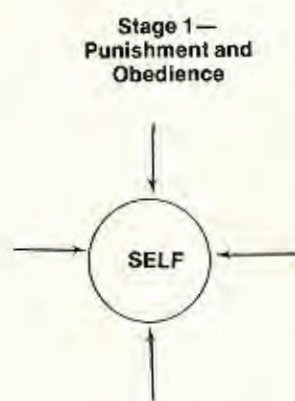
Michael Scriven declares in his challenging paper "Some Issues in the Logic and Ethics of Mainstreaming" (1976, p. 64), that ". . . prejudice is the problem, and it is a moral problem." Dr. Scriven sees the necessity but also the complexity of teacher training in the area of ethics if mainstream education is to be accepted. Education on moral issues requires a sound theoretical base, and the right of the handicapped to an equal education and the responsibility of educators to provide for this equality needs to be examined within a moral philosophy.

Recognizing that theoretical positions on the process of moral development range across biological, psychoanalytic, social learning and developmental perspectives—the authors of this paper have deliberately chosen a cognitive-developmental approach to viewing mainstream education issues because the structure of this paradigm seems to best deal with the complexity of the issues.

Dr. Lawrence Kohlberg (1969), a philosopher/psychologist/educator at Harvard University, has researched cognitive-developmental stages of moral reasoning which

build upon the earlier work of John Dewey and Jean Piaget. Dr. Kohlberg concludes that the principle of justice is the most essential structure of morality, and that the core of justice is the distribution of rights and duties regulated by concepts of equality and reciprocity. By probing the reasoning of persons in cross-cultural samples on issues involving moral dilemmas, Dr. Kohlberg has identified six stages of moral reasoning. His stages and their relationship to justice in mainstream education are interpreted by the authors of this article in Figure 1.\*

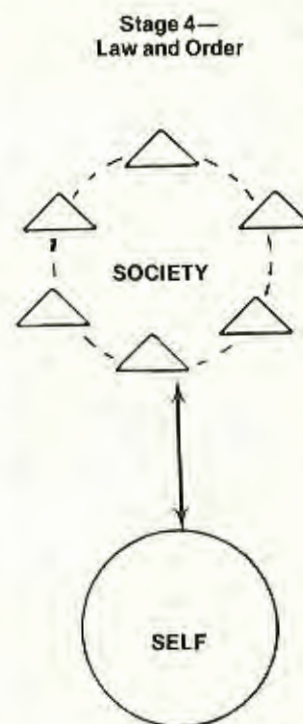
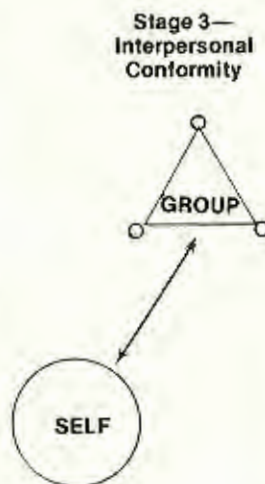
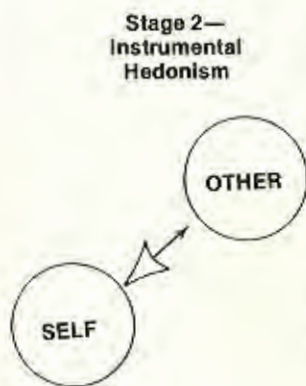
\*Acknowledgement is given to Philip Schaffer, Ph.D., University of Minnesota, 1974 for the pictorial diagrams of each stage.



**Figure 1.**  
**Kohlberg's Stages of Moral Development as They Relate to Mainstream Education**

At the first stage of moral reasoning, the understanding of concepts of justice is limited to concern about the self. Fear of punishment dominates one's motives; actions are judged in terms of their physical consequences. This early stage of reasoning is difficult to apply to justice in mainstreaming, although an example might be a person extending help to a crippled or deformed person out of a perceived fear of punishment based on the fear of differences (examples in *Notre-Dame De Paris*, *The Pigman*).

The second stage of moral reasoning offers some advance over Stage 1 in that the person perceives the other as a separate person having claims of his or her own. However, the basic motive is to satisfy one's own needs, and justice to another is only extended if some trade-off seems possible. Manipulation and exploitation are dominant motives and some people continue to reason at this stage across their life span. In relation to mainstream education, an example of this reasoning is sometimes heard on the district level: "We'll mainstream the handicapped because we need the federal dollars it brings into the school system." Or, on an individual teacher level: "I'll go along with mainstreaming since it appears to be the only way I can keep my job." (exam-



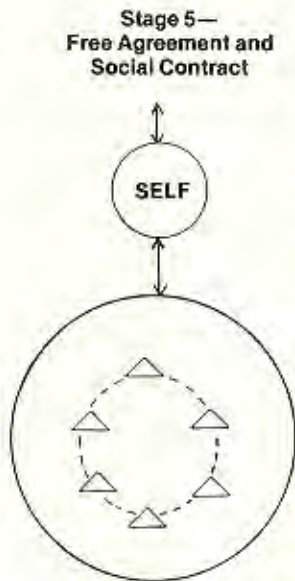
ple: final statement in "To The World's Grapepickers upon Entering the Vineyards" ... "In short, let's get the crop out or we will all be looking for jobs.")

Conformity to in-group norms is the dominant motive for extending justice at stage three. This is an advance over stage two in that mutuality and concern is extended to other people without "keeping tally." However, the other people are limited to peer groups with whom one feels affection or sameness. Thus, justice is only extended to those who are like oneself in some way, and the motive is to be perceived as a 'nice person,' to be accepted by the group. For mainstream education this means making moral decisions in accordance with the strongest stimulus. If the dominant teacher group or peer group is supportive of mainstreaming, so is the individual; if the forces are against mainstreaming, so is the individual. (example: the reasoning of the teacher in the classroom who wants to see only reflections of herself, who is most comfortable with those offering mirror images of the self—in the article "Mirror, Mirror on the Wall," by James Reussing, 1976.)

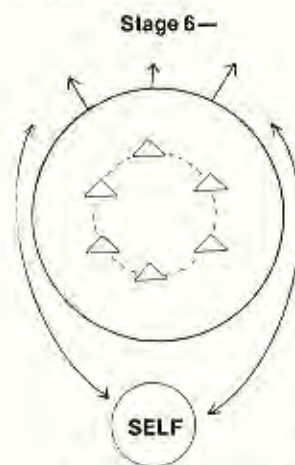
A major shift in the conception of justice occurs at Stage 4. Fairness is extended to persons across society without the condition of sameness or of personal affection. The primary motive, however, is for order, and the focus is on preserving society (not just obeying, as in Stage 1). For mainstream education this means extending justice within the interpretation of existing laws. Educators may express the willingness to participate in mainstream education because, "We have no choice, the law says so." (example: the passage of Public Law 94-142 is important because it uplifts mankind from moral reasoning at stages 1, 2, 3 and requires that a higher form of justice be extended. While this does not

guarantee people will act in accordance with the law because of principle, it is a step forward in bringing about more just behavior.)

At the fifth stage of moral reasoning, a person recognizes that justice cannot be determined by considering only one's own needs, or even the existing customs or laws. There are no legal absolutes—changes in the laws need to be made democratically as new insights on justice are acquired. The U.S. Constitution is written in Stage 5 terms. Where law is not affected, what is right is a matter of personal agreement between persons. However, values and rights like life and liberty are upheld regardless of majority opinion. In mainstream education, those persons who have taken leadership to change the laws and to implement a more just schooling because of the inherent rights of the handicapped, are conceptualizing at this stage of reasoning.



However, conflicts of rights between the needs of 'regular' and 'special education' children become apparent at this stage, and can best be resolved within stage 5 and 6 philosophy. (example: see Mann and Chitwood, "Law and Mainstreaming: Letter and Spirit," 1976, pp. 220-229).



Persons reasoning at Stage 6 maintain the validity of moral principles and have a sense of personal commitment to them. Their principles deal with universal principles of justice: equality of human rights and respect for the dignity of human beings as individual persons. The golden rule, "Do unto others as you would have them do unto you" is such a universal principle. In relation to mainstream education, it is recognized that persons are ends in themselves and must be treated as such.

A profound description of a stage 6 conception of humanity and the restrictions we all face in reaching this perspective is given in a quotation by Albert Einstein (1972):

"A human being is a part of the whole, called by us the "Universe," a part limited in time and space. He experiences himself, his thoughts and feelings as something separated from the rest—a kind of op-

tical delusion of his consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest to us. Our task must be to free ourselves from this prison by widening our circle of compassion to embrace all living creatures and the whole of nature in its beauty. Nobody is able to achieve this completely, but the striving for such achievement is in itself a part of the liberation and a foundation for inner security."

### Teacher Education as Adult Education: The Minnesota Project.†

Long ago, John Dewey claimed that true education is development, and that development can be the aim of education. The philosophical theories of John Dewey and the psychological theories of Jean Piaget, Lawrence Kohlberg, Jane Loevinger, David Hunt and others on stages of developmental maturity have offered a sound base of intellectual heft for the curriculum and staff development work in the Developmental Education Program at the University of Minnesota. Our early work in this program (1972-1976) focused on developing classroom curricula and instructional methods that would deliberately promote psychological maturity in adolescents.

Significant growth in such areas as ego maturity, moral reasoning, empathy and communication skills has been repeatedly found in pre and post test data on the experimental classes developed by the professors and graduate students in our program in collegiality with public school teachers (see Erickson, 1977; Bernier and Rustad, 1977; as examples). During this research and development work on curriculums for adolescents, we came to fully realize that if teachers are to become psychological educators who deliberately promote the development of their pupils we need to first ask, "what stage of development does the teacher/researcher need to attain?" The BEH Dean's Grant (1975-1977) has provided the opportunity to explore this question and to try out a program for deliberately promoting conceptual, ego, and moral maturity with adult teachers.

The focus of the Minnesota developmental education program is on *how* a person processes information and makes meaning of his/her experience. Thus, education is seen as more than learning a set of behaviors and skills. True education, in the John Dewey sense, must involve a repatterning or restructuring of one's thinking such that an increase in the complexity, differentiation and integration of the conceptual process, ethical reasoning, or ego itself, results. To teach in a way that promotes this kind of restructuring is a *methode clinique* which likely goes back to Socrates.

To capture the main ingredients of developmental teaching in the Minnesota program, we need to examine the concepts of structural organization, developmental sequence and interactionism.\*\*

†The authors wish to acknowledge Co-Director, Dr. Norman A. Sprinthall, and the numerous other staff members who have contributed to the Developmental Education Program during the years of research and development work on which this section is based.

\*\*Appreciation is extended to Dr. James Rest, a colleague in the College of Education, U of Minnesota, for his initial conceptualization of these ingredients.

\*\*This data was collected and reported by Joseph Bernier, see unpublished Ph.D. thesis, 1976.

a) **Structural Organization:** If we want to develop educational programs that deliberately promote maturity we must begin by focusing on **how** the person thinks—what stimuli they attend to, how these are organized into categories, how decisions are processed. The mode of thinking that was dominant in the two teacher education groups that we have worked with during the past two years was a stage 3/4 conformity/conscientious thinking and stage 4 conscientious thought. This means the teachers tended to still use some conventional other-directed conformity as a basis for moral judgment, and still had some conformity-based ego integration which accepts stereotypes, normative behavior, displays little differentiation in feelings, and does not yet master conceptual patterning. To plan a staff development program which stretches thinking, which triggers growth, we considered the characteristics of the next stage of maturity as a deliberate educational goal.

b) **Developmental Sequence:** If we know what a higher form of development is, we know the goals of learning. If we know the qualities of the next stage of growth, we can then match or 'constructively mismatch' curriculum experiences to help persons organize concepts at the next higher stage. The concept of growth is not value free. In the staff development with teachers, we set goals characteristic of the stage 4 conscientious ego and moral structures, and stage 5 autonomous and principled reasoning (Loevinger, 1976). Persons at stage 4 see life as presenting choices, they have a strong sense of responsibility, a conception of privileges, rights, and of justice and fairness. Self-evaluated standards, differentiated feelings, and concerns for communications are all characteristics of persons at this stage. At the autonomous and principled stage (5) we add the respect for autonomy of others, toleration for ambiguity, broad scope objectivity and a sense of self-fulfillment and self in the social context.

c) **Interactionalism:** Curriculum experiences to promote growth need to consider the John Dewey theory of how cumulative growth can occur. Dewey viewed the person within the environment and believed it is this interaction which changes the structure of thinking. In the teachers' workshops, we made use of this interactionalism through three 'new R's'—role-taking, genuine responsibility and rigorous reflection. Brief summaries of these focus areas follow.

The teachers learned theory on role-taking and then practiced using empathy in perspective-taking sessions until they could accurately identify both content and feelings in communication with others. Multiple theories of developmental growth and related developmental curriculum models were then presented to the participants. After extensive presentations on connecting theory to practice, the teachers took responsibility for contracting the development of curriculum mini-units, based on these theories, that would deliberately promote psychological growth in the pupils in their own classrooms. This field-based curriculum try-out phase was supervised on-site by graduate teaching assistants in the program. Seminar sessions were held daily during the summer workshops and also weekly during the field-based phase to actively promote reflection and restructuring on this learning. In these seminar sessions a strong focus was placed on self-growth, and adult development theories were employed as we helped each other map out and experience the change process.

The results of the first year five-week summer workshop and fall practicum\* (N = 25 inservice teachers) indicated that significant changes occurred in empathy as measured by content and feeling responses to a videotaped "client" ( $p < .0001$ , two tail). Also, significant changes were found on the percentage of principled thought of the participants as measured by the Rest Defining Issues Test (an objective measure of Kohlbergian moral reasoning) ( $p < .01$ , two tail). On the Loevinger ego measure no growth changes were measurable.

Results on the second year five-week summer workshop and fall practicum\*\* (N = 37 teachers) again provided evidence for growth. Significant change was found in response to the video tape empathy test ( $p < .001$ ), and an analysis of the Rest test showed significant gain in principled moral thinking ( $p < .02$ , one tail). In addition, change on the Hunt conceptual test was significant ( $p < .01$ , one tail). Again, no significant growth was measured on the Loevinger ego test, a finding consistent with the theoretical position on the stability of the construct. No pre to post changes were found on the control group on these measures.

An additional study†, an in-depth case study analysis of the teaching behavior of five of these teachers, was also carried out during the past year. The teachers' conceptual, moral and ego scores were explored in this study in relationship to their scores on rating scales on their teaching practice. Strong trends were identified between the level of facilitative teaching used over a wide range of classroom situations and the level of developmental reasoning of the five observed teachers.

Maynard C. Reynolds and Jack W. Birch in their recent book, **Exceptional Children in America's Regular Schools** (1977), propose twelve dimensions on which regular classroom teachers could examine their accommodation of exceptional children on qualitatively sequenced rating scales. These twelve dimensions of accommodation include: space and facilities arrangements; teaching-learning settings; teaching and learning materials; classroom management and communication; cooperativeness of the social environment; appreciation of cultural and socio-economic differences; sharing of the control and responsibility of the school environment; individualization of learning time; evaluation of progress. The scales on these twelve dimensions provide an excellent behavioral rating of expressed concern for mainstream education. It would also appear that the qualitatively sequenced responses on each dimension would relate to qualitatively different levels of developmental maturity. Thus, theoretically, a teacher who has a high level of complexity, differentiation and integration in his/her personality structure is more likely to score higher on the Reynolds/Birch accommodation scales than is a teacher who displays little differentiation and who blindly accepts stereotypes and normative standards. A future study\* researching this relationship between accommodation scores and developmental maturity scores could provide important evidence for the link between maturity of reasoning and maturity of teaching behavior in mainstream education.

\*\*This data was collected and reported by Sharon N. Oja, see unpublished Ph.D. thesis, 1977.

†See unpublished Ph.D. thesis, Carol E. Witherall, 1978.

\*This research is in an exploratory phase and data will be collected by the authors of this paper, spring, 1978.

### Summary and Closing Notes

The focus in this paper on mainstream education has been on the underlying core issue of justice. Perspectives of the concept of justice from current mainstream literature were reviewed, Lawrence Kohlberg's theoretical position on the developmental process of moral problem-solving was summarized, and research and development from the University of Minnesota Developmental Education Program were presented.

The perspectives in this paper offer a preliminary attempt to conceptualize the relationship between justice and mainstreaming. It is our hope that the ideas put forth may stimulate new thinking for the reader, create that 'pinch of anxiety,' and bring us closer to working through some of the issues challenging us today through the mainstreaming movement.

### References

- Bernier, Joseph. **A psychological education interaction for teacher development.** Unpublished doctoral dissertation, University of Minnesota, 1976.
- Bernier, Joseph and Rustad, Kenneth. Psychology of counseling curriculum: A follow up study. **The Counseling Psychologist**, 6, 4, 77, pp. 18-22.
- Dewey, John. **Experience and education.** New York: Collier, 1963 (written in 1938).
- Einstein, Albert. Excerpt from the **New York Post**, November 28, 1972.
- Erickson, V. Lois. Deliberate psychological education for women: A curriculum follow-up study. **The Counseling Psychologist**, 6, 4, 1977, pp. 25-29.
- Erickson, V. Lois. Deliberate psychological education: From primary prevention to the promotion of human growth. **Journal of Clinical Child Psychology**, Winter, 1978.
- Erikson, Erik. **Dimensions of a new identity.** New York: W. W. Norton, 1974.
- Hunt, David and Sullivan, E.V. **Between psychology and education.** Hinsdale, Illinois: Dryden Press, 1974.
- Keniston, Kenneth. Do Americans really like children? **Today's Education**, Journal of the National Education Association, Vol. 64, No. 4, Nov.-Dec., 1975, pp. 16-22.
- Kohlberg, Lawrence. Stage and sequence: The cognitive-developmental approach to socialization. In Goslin, D. (Ed.), **Handbook of socialization theory and research.** New York: Rand McNally, 1969.
- Loevinger, Jane. **Ego development.** Jossey Bass, 1976.
- Mann, Philip H. and Chitwood, Janet S. Law and mainstreaming: Letter and spirit. In Mann, Philip H. (Ed.) **Shared responsibility for handicapped students: Advocacy and programming.** Miami: Ohmann, 1976, pp. 220-229.
- Morton, Kathryn and Hull, Karen. Patents and the mainstream. In **Mainstreaming and the minority child**, R. Jones (Ed.), Council for Exceptional Children, Reston, Virginia, 1976, pp. 37-52.
- Nash, Herbert D. Considering the issues. In R. Jones (Ed.) **Mainstreaming and the minority child**, Council for Exceptional Children, Reston, Virginia, 1976, pp. 46-50.
- Oden, Chester, W. Desegregation and mainstreaming: A case of *deja vu*. In R. Jones (Ed.), **Mainstreaming and the minority child**, Council for Exceptional Children, Reston, Virginia, 1976, pp. 53-64.
- Oja, Sharon. **A cognitive-developmental approach to adult conceptual, moral and ego development through inservice teacher education.** Unpublished doctoral dissertation, University of Minnesota, 1977.
- Piaget, Jean. The general problems of the psychobiological development of the child. In J.M. Tanner and B. Inhelder (Eds.) **Discussions of child development: Proceedings of the World Health Organization study group on the psychological development of the child.** Vol. IV, New York: International Universities Press, 1960, pp. 3-27.
- Reusswig, James S. Mirror, mirror on the wall. In Mann, P.H. (Ed.) **Shared responsibility for handicapped students: Advocacy and programming.** Miami: Ohmann, 1976, pp. 51-55.
- Reynolds, Maynard C. and Birch, Jack W. **Exceptional children in America's regular schools.** Council for Exceptional Children, 1977.
- Scriven, Michael. Some issues in the logic and ethics of mainstreaming. In **Mainstreaming: Origins and implications.** Minnesota Education, Vol. 2, 2, Spring, 1976, pp. 61-67.
- Sprinthall, R.C. and Sprinthall, N.A. **Educational psychology: A developmental approach**, 2nd Edition, Chapter 22. Reading, Mass.: Addison-Wesley, 1977, pp. 589-617.
- Witherell, Carol E. **An analysis of the developmental structure of teachers' classroom behavior, conceptions of teaching, and psychological constructs: Five case studies.** Unpublished doctoral dissertation, University of Minnesota, 1978.