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Benefits of preschool on at-risk student achievement

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Benefits of preschool on at-risk student achievement

Abstract

Historically, education has been a vehicle by which individuals improved their chances for a more productive and personally satisfying life. When the studies of the effects of early childhood education began in the 1960s, the basic question under investigation was, "Does preschool education make a difference in the lives of children?" Fears at that time were that preschool would be harmful to the development of children and to their relationship with their families.

BENEFITS OF
PRESCHOOL ON AT-RISK STUDENT ACHIEVEMENT

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Marilyn L. Ward
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Historically, education has been a vehicle by which individuals improved their chances for a more productive and personally satisfying life. When the studies of the effects of early childhood education began in the 1960s, the basic question under investigation was, "Does preschool education make a difference in the lives of children?" Fears at that time were that preschool would be harmful to the development of children and to their relationship with their families.

Several longitudinal studies initiated in 1962 before the advent of Head Start, were directed by Susan Gray (1982) and Weikart, Bond & McNeil (1978). These studies sought to identify the difference preschool education makes in the lives of children by establishing designs in which experimental groups participated in preschool education and control groups did not participate (Garber & Herber, 1981; Irvine, 1982; Levenstein, O'Hara & Madden, 1983; Monroe & McDonald, 1981; Palmer, 1983). Later evaluation studies were funded to study the impact of the National Head Start Program (Lazar, Darlington, Murray, Royce, & Snipper, 1982; Hubbell, 1983; HEW Consortium on Longitudinal Studies, 1983).

The basic finding was that high quality preschool education for at-risk children is a highly effective way of improving their life chances. Most important from the public viewpoint, it has payoffs for society in that it can enhance the quality of life for the community as a whole.

The evidence generated by longitudinal research on the effectiveness of early childhood education programs of high quality provides strong support for policymakers to use public funds to expand such programs. According to Kagan (1989), politicians, intrigued by the potential savings associated with early intervention, are passing legislation that enhances both the availability and quality of services. Interest in the care and education of young children is at an all-time high on Capitol Hill and in the White House, and strong bipartisan support may yield far-reaching legislation. Numerous child care bills have been introduced in Congress while state legislatures and local municipalities continue to discuss the child-care issue. National and local foundations are funding research and action proposals, and numerous corporations have launched programs and services for employees, their children, and their families.

Definition of At-Risk Children

Many different groups of people are aware of and concerned about the at-risk student. What does it mean when we say that a young person is at-risk? The Phi Delta Kappa Study of Students At-Risk (Frymier & Gansneder, 1989) began with the assumption that children are at-risk if they are likely to fail—either in school or in life.

Kagan (1989) defines at-riskness as a function of what bad things happen to a child, how serious they are, how often they happen, and what occurs in the child's immediate

environment. For example, a pregnant 14-year-old is at-risk; a pregnant 14-year-old who uses drugs is even more at-risk; and a pregnant 14-year-old who uses drugs, has been retained in a grade, has poor attendance in school, and has a low sense of self-esteem is more seriously at-risk.

Being at-risk is not strictly an adolescent phenomenon. Children of all ages are at-risk. A 5-year-old whose parents are in the process of divorce and who is doing poorly in school is at-risk. A 16-year-old who is a good student but who is depressed because she lost her boyfriend is also at-risk. A 9-year-old whose brother dropped out of school and whose father lost his job is at-risk as well.

Kagan's research (1989) reflected that children who have not acquired minimal social competence by the age of about six are more likely to become school dropouts. They will also be at significant risk in their young adulthood in terms of mental health, marital adjustment, and other aspects of social life in which interpersonal competence is required.

The Iowa Department of Education defines a student at risk as one who is not succeeding in the educational program designed by his or her district. The criteria include students who are at risk of dropping out of school or who are doing poorly in their academic, personal, or social career or vocational development (Bartusek, 1989).

Need for Preschool for At-Risk Students in Iowa

The report of the Iowa Prekindergarten/Kindergarten Task Force (1987) recognized several existing conditions involving the need of preschool education for four-year-olds:

1. Public involvement in preschool programs is growing.

The number of children in the United States enrolled in kindergarten has gone from 83% in 1964 to 96% in 1985.

2. The number of preschools is also on the rise. However, most are not publicly funded. In 1964, 10% of the three- and four-year-olds were enrolled in preschools compared to 39% in 1985.

3. With federal support and control of education dwindling, many state governments are beginning to consider establishing programs to provide educational opportunities for all four-year-olds.

American society, by investing in education, has reaped the benefits of meaningful progress in our nation's development. Prompted by the report of the National Commission on Excellence in Education (1983), public involvement took on new urgency. Since then, interest in the care and education of young children has received a great deal of public attention. Today, people are seeking new ways to improve the quality of education and, therefore to improve the quality of life.

As Kagan (1989) suggests, efforts at the local level are

already underway to improve existing school services, to add new services directly, or to expand the role of schools as provider of services within communities. Throughout the nation, schools are forming new ways to improve their relationships both with families and other institutions that serve young children.

Grieves (1991) indicates that some of the early childhood needs in Iowa schools are currently being addressed through such programs as infant/toddler care, all-day, every-day kindergarten, preschool for three- and four-year-olds, and special programs for three-, four- and five-year-olds who have been identified as at-risk. These programs have been provided because educators, including superintendents and board members alike, saw the long-range benefits of preschool education. He goes on to suggest that children at-risk are not receiving an equal educational opportunity. As more students are identified as at-risk, it becomes increasingly important that school districts specifically address their needs. Long-range costs of either providing or not providing extra programs for at-risk students in Iowa must be considered. Research in Iowa by Grieves (1991) indicates that:

At least 16% of the children live below the poverty level.
Iowa marriages end in divorce at least 40% of the time.
Approximately 25% of the children in Iowa live in one parent families. One parent families consist mainly

female headed households (90-95%). The Iowa figures are below the national average, yet they are not figures to be proud of. (p. 3)

Preschool as a Service to Society

Although different groups of people are exerting efforts to expand early care and education and to restructure the schools to provide for such care, they all share common beliefs, goals and strategies. One such belief recognizes that children are entering a world that is increasingly pressured and technologically advanced, therefore requiring complex social and cognitive skills. To prepare children to meet this kind of world and to enable them to cope with such problems as drug use, fragmented family structure and widespread poverty, educators must do more than just teach the basics. Motivated by the changing population, values and perceptions of social responsibility, schools are addressing problems of society and are becoming effective agents of social reform (Kagan, 1989).

The Perry Preschool Project

The Perry Preschool Project (Berrueta-Clement, Schwienhart, Barnett, Epstein, & Weikart, 1984) was one of the principal studies supporting the value of early education. It has become the most frequently cited program showing gain from the preschool experience (Iowa Prekindergarten/Kindergarten Task Force Report, 1987).

The Perry Preschool study sample consisted of 123 black

children selected from their community on the basis of low IQ test scores (61-88 on the Stanford-Binet) and low family socioeconomic status. For a five-year period students were randomly assigned to an experimental group and a control group (Barnett & Escobar, 1987).

The parents had an overall median of 9.4 years of school. Fewer than 1 in 5 of the parents had completed high school, compared to 1 in 2 nationally. About half the families in the sample were single-head families, compared to 1 in 7 nationally (Berrueta-Clement et al., 1984).

The Perry Preschool Project collected a broad spectrum of longitudinal data. There was little attrition of students during the project. The initial findings included significant gains in IQ for those who attended preschool. As in similar studies (Consortium for Longitudinal Studies, 1983), the IQ difference disappeared several years after school entry. However, other variables indicated persistent differences favoring the preschool group in educational placement, school achievement, and educational attainment. At age 19 the preschool group was advantaged in nonschool outcomes as well (Barnett et al., 1987).

According to David Weikart (cited in Hechinger, 1986), the Perry Preschool study was formidable for several reasons:

1. Compared to cross-sectional surveys, the study sample (123) was small. Almost all of the sample subjects were still available at the conclusion of the project thus

eliminating the attrition problem.

2. There was no reason during follow-up for teachers to attach any importance to the fact that some children had attended a preschool program and some had not. At that time, preschool education was rare for any child; teacher bias toward one group or the other was essentially nonexistent.

3. Data from the study was internally consistent over the years, no matter how or by whom the data was collected. It is also important to note that the data collected from the subjects' self-reports have been corroborated by data collected by outside agencies.

4. The study included the most complete cost-benefit analysis of preschool education undertaken.

5. The study focused on collecting variables meaningful to society. Data was collected on real achievement as well as on success in test scores.

Benefits of Preschool for At-Risk Students

According to studies (Spenser & Brinkman, 1986; Berrueta-Clement et al., 1984; Stevens, 1981; The Consortium on Longitudinal Studies, 1978; Schweinhart & Weikart, 1980) preschool for at-risk students has five major immediate effects.

1. Attendance. Throughout the elementary school years, students who had attended preschool averaged four days fewer absences (12 days) per year than those who had not attended

preschool (16 days) per school year.

2. IQ Performance. Early education greatly improved the performance of the Perry Preschool participants on IQ tests. Children gained an average of 27 points during the first year of preschool. Researchers tested the children through their tenth year to determine whether these improvements were long lasting and found that the students' IQs had stabilized at a higher level than those of a similar group of youngsters who had no preschool experience (Spenser & Brinkman, 1986). Contrary to initial expectations based on early IQ change, IQs were equivalent in both the preschool and non-preschool groups by second grade.

3. Academic Achievement. Preschool education led to improved scholastic achievement and placement as measured by standardized achievement tests. Significant group differences were found for 9- and 10-year-olds, all in favor of the experimental group. Not only did preschool education contribute to improvement in overall performance throughout grades K-12, children who attended preschool continued to achieve better grades through secondary school.

The average achievement test score at age 14 of those students attending preschool was 1.2 grade-equivalent units higher than the average score of those who did not attend preschool. There were significant differences in favor of preschool attendees in reading, vocabulary, math concepts/

problems, and language and spelling, although not in reading comprehension (Stevens, 1981; Berrueta-Clement et al., 1984; The Consortium on Longitudinal Studies, 1978).

School records were adequately complete to yield school grade point averages for 64% of the study sample; the control group had achieved a C- average, while those students having attended preschool had slightly better than a C average (Berrueta-Clement et al., 1984). Also, two out of three individuals who attended preschool graduated from high school. The comparable graduation rate for persons who had not attended preschool was one out of two (Schweinhart & Weikart, 1980; Berrueta-Clement et al., 1984).

4. Special Education. By the fourth grade children who had attended preschool were less likely to have been placed in special education or retained in a grade than those who had not attended preschool by the fourth grade. After being classified as handicapped those students who had attended preschool spent fewer school years in special education—that is, in integrated or self-contained classrooms. The mean number of years spent in special education was significantly lower among those individuals receiving special education services.

For those who had gone to preschool and were later classified as handicapped, the average time spent in special education was about 5 1/2 years compared to 7 1/4 years for those who had not attended preschool (Berrueta-Clement et al., 1984).

The special education placement reflected the most significant difference due to preschool attendance. Of the preschool attendees only 19% had received one or more years of special education compared to 39% of the non-preschoolers (Berrueta-Clement et al., 1984).

5. Attitudes towards education. At the age of 15, children who had attended preschool not only placed a higher value on their education these same students had developed a stronger commitment to school than the non-preschool group. When interviewed at age 15, these students expressed a greater willingness to talk to their parents about school, invested more time on homework, and rated themselves more highly on school ability (Stevens, 1981; Berrueta-Clement et al., 1984; The Consortium on Longitudinal Studies, 1978).

At age 19, persons having attended preschool scored higher than those with no preschool on the Adult Performance Level Survey, a measure of competence in everyday life skills.

The Perry Preschool Project (Berrueta-Clement et al., 1984) also reported the fact that preschool attendees were more likely to have enrolled in some type of further education or vocational training after graduating from high school. Thirty-eight percent of those who had attended preschool pursued further education or training compared with 21% of those who had not attended preschool.

Likewise, early education led students to higher levels of

employment, less unemployment, and higher earnings by the age of 19. Participants of the Perry Preschool Study were more likely to be employed at the time of their follow-up interview if they had attended preschool; they also reported greater job satisfaction.

Furthermore, those students who had attended preschool were more likely to be supporting themselves solely on their own earnings and receiving less public assistance than the non-preschool subjects. A study of official records reflected that preschool led to reduced use of certain kinds of welfare. For example, students who had attended preschool were less frequently the recipients of General Assistance funds. In comparison with the non-preschool students, a higher percentage of preschool students reported that they also saved money on a regular basis (Berrueta-Clement et al., 1984).

Conclusion

The persuasive findings of the Perry Preschool Project no longer stand alone. Other experiments, independently carried out, have corroborated similar findings (Casto & Mastropieri, 1986; Consortium on Longitudinal Studies, 1983; Ramey, Bryant, & Suarez, 1985).

These research findings indicate that high-quality preschool programs for disadvantaged children produce long-term changes in their lives—changes that allow more education, training, and employment; welfare support; and a pattern of life

These research findings indicate that high-quality success that not only is more productive for children and their families but is also advantageous to society-at-large in the quality of community life.

According to Burreta-Clement et al. (1984), early childhood education is not a panacea. It does not solve the nation's unemployment problem; does not solve the problem of how to deliver effective education in the elementary and high school years to the "graduates" of good early childhood programs; it does not solve the problem of inadequate housing; and it does not solve the nation's crime problem. Early childhood education does give young children in need firmer foundation on which to mature and prosper—an edge in opportunity and performance. It is a part of the solution, not the whole solution.

Early childhood educators must communicate the importance of preschool education to the general public. Given the kind of information in this report of short- and long-term benefits most people are not likely to oppose early childhood education.

Preschool education can significantly increase the efficiency of both elementary and secondary education, not just by reducing costs but also by increasing effectiveness. Preschool will increase the school performance of children who

are at-risk. These students are more committed to education and achieve greater short- and long-term benefits from it.

References

- Bartusek, L. (1989, October). Our kids at-risk: A profile. Dispatch 18 (4), 2.
- Barnett, W. S., & Escobar, C. M. (1987). The economics of early educational intervention: A review. Review of Educational Research 57(4), 387-414.
- Berrueta-Clement, J. R., Schwienhart, L. J., Barnett, W. S., Epstein, A. S., & Weikart, D. P. (1984). Changed lives: The effects of the Perry Preschool Project on youths through age 19. Monographs of the High/Scope Educational Foundations, 5(2), 25-35.
- Casto, G., & Mastropieri, M. A. (1986). The efficacy of early intervention programs: A meta-analysis. Exceptional Children, 52, 417-424.
- Consortium on longitudinal studies. (1978). Lasting effects after preschool!. Washington, DC: U. S. Department of Health, Education and Welfare, Administration for Children.
- Consortium on longitudinal studies. (1983). As the twig is bent...lasting effects of preschool programs. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Frymier, J. & Gansneder, B. (1989). The Phi Delta Kappa study of students at risk. Phi Delta Kappan, 71, 142-146.
- Garber, H. L. & Heber, R. (1981). The efficacy of early intervention with family rehabilitation. In M. J. Begab, H. C. Haywood, and H. L. Garber(Eds.), Psychological influences in retarded performance: Vol. II Strategies for improving competence (pp. 71-88). Baltimore, MD: University Park Press.
- Gray, S. W. (1982). From 3 to 20--the early training project. Baltimore, MD: University Park.

- Grieves, T. (1991). The future of early childhood education in the public schools in Iowa. On the line, 6(3), 3.
- Hechinger, F. M. (1986). A better start: New choices for early learning. New York: Walker.
- Hubbell, R. (1983). Head Start evaluation, synthesis, and utilization project (DHHS Publication No. OHDS 83-31184). Washington, DC: U. S. Government Printing Office.
- Iowa Department of Education. (1987, October). Iowa Prekindergarten/Kindergarten Task Force Report. Des Moines, IA: Author.
- Irvine, D. J. (1982). Evaluation of the New York State Experimental Prekindergarten Program. Paper presented at the annual meeting of the American Educational Research Association, New York City.
- Kagan, S. L. (1989). Early care and education: Reflecting on options and opportunities. Phi Delta Kappan, 71, 104-106.
- Lazar, I., Darlington, R., Murray, H., Royce, J., & Snipper, A. (1982). Lasting effects of early education. Monographs of the Society for Research in Child Development. 47 (2-3, Serial No. 195).
- Levenstein, P., O'Hara, J., & Madden, J. (1983). The mother-child home program of the verbal interaction project. In Consortium for Longitudinal Studies, As the twig is bent...lasting effects of preschool programs (pp.237-264). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Monroe, E., & McDonald, M. S. (1981). Follow-up study of the 1966 Head Start programs. Rome City Schools. Rome, Georgia. Unpublished paper, Rome, GA.
- National Commission on Excellence in Education. (1983). A nation at risk...the imperative for educational reform. A report to the Nation and the Secretary of Education, United States Department of Education.

- Palmer, F. H. (1983). The Harlem Study: Effects by type of training, age of training and social class. In Consortium for Longitudinal Studies, As the twig is bent...lasting effects of preschool programs (pp. 201-236), Hillsdale, NJ: Lawrence Erlbaum Associates.
- Ramey, C., Bryant, D., Suarez, T. (1985, October). Does early intervention make a difference? Paper presented at the National Early Childhood Conference on Children with Special Needs, sponsored by the Council for Exceptional Children, Denver, CO.
- Schweinhart, L. J., & Weikart, D. P. (1980). Young children grow up. Monographs of the High/Scope Educational Research Foundation, Ypsilanti, MI.
- Spencer, L., & Brinkman, N. A. (1986). What makes a good preschool program? High/Scope Resource. Ypsilanti, MI: The High/Scope Press.
- Stevens, C. H. (1981). Young children grow up. Young Children, 36(6), 56-61.
- Weikart, D., Bond, J. T., & McNeil, J. (1978). The Ypsilanti Perry preschool project: Preschool years and longitudinal results through fourth grade. High/Scope Educational Research. Ypsilanti, MI: The High/Scope Press.