This study investigated whether Mississippi's Parents as Teachers (PAT) program was advancing parent involvement in children's learning at home and when children entered formal schooling. It focused on whether there were differences in frequency of school participation and in levels of engagement in home learning activities between parents who had and had not participated in the PAT program. Participants were 40 parents who had been part of a PAT program for at least 10 months and 40 non-PAT parents who acted as controls. Both groups had children enrolled in public or private pre-kindergarten and kindergarten classes for 2002-03. A parent questionnaire was developed to collect data on parents' involvement in school activities and learning activities within the home. Most of the respondents' children lived in homes where there was one parent. Half of the parents had completed high school or obtained a GED certificate. About half of the children had been in Head Start for 2 years. Overall, the results found significant differences between the two groups on the frequency with which they engaged in school involvement activities and home learning activities, with PAT participants much more involved. (Contains 87 references.) (SM)
PARENTS AS TEACHERS: ADVANCING PARENT INVOLVEMENT
IN A CHILD'S EDUCATION

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Introduction

Federal and state legislation relevant to education has been created to increase parental involvement in schools and thereby increase student success. School district’s Title I funds for high poverty schools, the Goals 2000: Educate America Act (1994), the Reading Excellence Act (1998), the Mississippi Reading Sufficiency Act (1999), and most recently, the No Child Left Behind Act of 2001 (2002a) required that schools promote parental involvement through interventions and literacy training. The goal is to assure that students enter school ready to learn. Parental involvement in early child care programs is not a new concept; during the twentieth century, many leading theorists and practices have involved the promotion of parent involvement in early child development.

In the 1960s, family involvement was believed to be a vital aspect of the Head Start program implemented in 1965 (Berger, 1991; Mallory & Goldsmith, 1991). Several studies have suggested that increased parental involvement in a child’s schooling results in higher student achievement levels (Epstein, 1991, 1995; Henderson & Berla, 1994; Lewis, 2001). Although there have been recent studies that do not substantiate large gains in student performance as a result of parental involvement (Bal & Goc, 1999; Quigley, 2000), there are other studies that indicate otherwise. These studies suggest that a positive relationship exists between early intervention efforts, parental involvement, and children’s learning, particularly when early literacy and family support services are provided (McGilly, 2000; Pfannenstiel & Barr, 1999; Pfannenstiel, Lambson & Yarnell, 1991, 1996; Pfannenstiel & Seltzer, 1985).

Children living in poverty are at an increased risk for failing to acquire early literacy skills. Poor reading skills are related to an increased risk for academic failure.
These factors may lead to increased school dropout rates (Denti & Guerin, 1999; Peck, Law, & Mills, 1987; Shaul, 2002; Woods, 1995). Further, low-income families are less likely to become involved in the schooling of their children (Becker & Epstein, 1982; Lareau, 1989; McNeal, 2001). Additional research has shown that many low-income children do not participate in quality childcare programs and are restricted in their access to quality childcare which can reduce many of the negative impacts of poverty on a child’s education and development (Antoon, Brooks, Hendrix, Layzelle, Lewis-Payton, McMillian, Ray, Thompson, E., & Thompson, R., 2002; Lewis, 2001; Peth-Pierce, 1991; Curry, Jamisson, & Martinez, 2001; U.S. Census Bureau, *Supplementary Survey Profile: Population and Housing Profile: Mississippi, 2000*). Although most early studies of childcare experiences had traditionally focused on center-based preschool programs, the Bowman, Burns, and Donavan (2000) report for the National Research Council (NRC) recently broadened the concept of early childhood intervention programs to include child and family intervention services which focus on literacy and parenting skills, regardless of whether these services are provided in a school- or home-based environment.

In the early 1980s, the state of Missouri piloted New Parents as Teachers (NPAT). This program was initially designed to support first-time parents of children between the ages of birth and three years in literacy training and parenting skills (Pfannenstiel et al., 1996, p. 1). The Parents as Teachers National Center, Inc. (PATNC), in St. Louis, Missouri, published the Parents as Teachers Program Administrative Guide in 1999. This document included guiding principles of the program’s initial and ongoing implementation. The fundamental goal of the program “is to provide leadership,
education, and support for the implementation of quality programs that enable families to become their children’s best first teachers” (Hoelker & McGilly, 1999, p. 5).

In the Parents as Teachers (PAT) Annual Program Report Summary, data gathered in the 2000-2001 school term revealed that more than 154,000 families participated in Missouri school district’s PAT programs (Parents as Teachers National Center [PATNC], 2002, para. 13). According to this report, 247,661 families were served by all PAT programs with 283,344 children receiving services and there were 2,800 PAT programs across all 50 states and other countries. The Parents as Teachers National Center had trained and certified over 10,000 certified parent educators since its implementation (Rhodes, 2002, The Parents as Teachers Program section, para. 19).

The basic service components of PAT are home visits delivered year-round by trained and certified parent educators, group meetings with other families in the program, periodic developmental screenings for children, and referrals to community services to address family needs beyond the scope of the PAT program. The program was built upon a “Strengths Model” that draws upon the family’s strength and relies on the parent, rather than a professional, to be the child’s best teacher (Koprowski, Korklan, & Kostelc, 1999, Module One, p. 1-3). The program is provided at no charge to the participating family. Participation is on a voluntary basis, and is open to all families and childcare providers. However, in many PAT programs families with special needs, i.e. teen parents, minority families, and families in poverty, are often targeted for recruitment (Hoelker & McGilly, 1999, p.18-23).

On February 12, 2002, the Committee on Health, Education, Labor and Pensions in the United States Senate for a Hearing on Early Education: From Science to Practice,
invited Rhodes, Director of Program Development and Evaluation at the Parents as Teachers National Center, to appear before the committee to present information relevant to the importance of early parental involvement in children's learning (para. 1). Rhodes reported that Parents as Teachers assists parents in giving their child the best possible start in life, is alone in offering a universal access model, is open and appropriate for all families, and blends well with many existing programs for families of young children (The Parents as Teachers Program section, para. 1). Rhodes's also reported that PAT uses a researched-based curriculum and presents the information in a parent-friendly format (para. 8), offers a holistic approach covering the four domains of development (cognitive, motor, social-emotional, and language), and promotes early family literacy with literacy activities as an important part of each home visit (para. 14).

One of the advantages cited by PAT is its adaptability to the needs of different families, cultures, and special populations (Hoelker & McGilly, 1999). Not only is it adaptable to specific family needs, the program is equally as adaptable to communities by drawing upon resources from the local public and private community. PAT programs have traditionally been implemented through public schools. However, there have been PAT programs delivered through health and social service agencies as well.

Mental health, social services and corrections view it as preventing and reducing abuse and neglect. Churches endorse it as strengthening family life. Business sees its potential for reducing stress and improving the quality of life for employees. Schools, of course, realize the benefits of reducing the need for special and remedial education and of forming positive relationships with families from early on. (Hoelker & McGilly, 1999, pp. 4-5)
Purpose of the Study

In 1999, The Mississippi Legislature passed Senate Bill 2609 which established a Parents as Teacher’s Pilot Program in Mississippi that read in part as follows:

An act to direct the State Board of Education to establish a pre-kindergarten ‘Parents as Teacher’s Pilot Program’ in the school districts in the state to assist parents in the development of learning skills of their children from birth to age five; to set forth the objectives of the program; to set forth the components of the program; to set forth procedures for application; to provide for funding; and for related purposes. (para. 1)

At the time of this study, there were 63 PAT Programs operating in Mississippi school districts, Head Start centers, community family resource centers, Mississippi Department of Human Services’ Families First Resource Centers, and the Mississippi Forum on Children and Families (Mississippi Forum on Children and Families web site, n.d.). Six of these programs are the 1999 pilot programs established through Senate Bill 2609. Fourteen PAT sites were established prior to 1999. Since 1999 to the time of this study, 48 PAT programs have been initiated (Mississippi Forum on Children and Families web site, n.d.). Most of these programs serve families with neonates to children 3 years old. However, 10 PAT programs in Mississippi serve families with children up to age 5. At the time of this study, the total number of families served in Mississippi PAT programs was 2,158 (Antoon et al., 2002, pp. 74-81).

Recent efforts in Mississippi were implemented to foster stronger school-to-home partnerships. The PAT program is designed to improve the early development of children through increased parental participation in learning activities and to better prepare young
children for school. The purpose of the present study was to determine whether PAT is advancing parent involvement in children’s learning at home and when children enter formal schooling.

Research Questions

1. Were there differences in the frequency of school participation between parents who had and had not participated in the PAT program?

2. Were there differences in the levels of engagement in home learning activities between parents who had and had not participated in the PAT program?

Definitions

Parent involvement has been written about and studied for many years and the concept of what constituted parent involvement varied depending upon the perspective of the researcher or author. Chavkin and Williams (1985) defined parent involvement as “any variety of activities that allowed parents participation in the educational process at home and at school” (p. 2). Berger (1991) described five levels of parent involvement which included active leader of education at home and school, decision maker, liaison between home and school, and supporter of educational goals. According to Epstein (1995) there were six categories or types of parent involvement, “providing for basic health needs, communicating with school, volunteering and attending school events, helping with learning at home, participating in school decision-making, and collaborating with the community” (The Core of Caring section, para. 2).

In order to consider the attributes of activities promoted by Parents as Teachers, the following definitions were used in this study.
1. **Parent or Primary Caregiver**: The adult in the child’s life that is either the biological parent of the child, has gained guardianship of the child or provided the majority of the daily care for the child.

2. **Parent involvement activities with a child’s learning at home**: Behaviors that comprise parent involvement activities in the home environment include literacy activities such as reading to the child, listening to the child “read” to the parent, telling stories to the child, and talking or doing math awareness activities (read recipes, measure items). Other behaviors include taking the child on special activities outside of the home (visits to the museum, zoo, library), discussion of the day’s events, encouraging the child to complete responsibilities (household chores), praising the child, teaching new skills to the child, helping with schoolwork, displaying artwork or schoolwork, and structuring the child’s out-of-school time to include rest, nutrition, and exercise.

3. **Parent involvement activities at school**: Behaviors that comprise parent involvement activities in the school environment include attending conferences with the child’s teacher, requesting a conference or meeting with the child’s teacher, talking with the child’s teacher on the telephone, writing notes to the child’s teacher, receiving and reading classroom newsletters, observing the child’s classroom, working directly with children in the child’s classroom and/or school, offering suggestions to the child’s teacher about teaching and learning, attending workshops or discussion groups for parents, attending PTA/PTO meeting or activities, attending school committees or advisory meetings, providing supplies for class parties or activities, helping the teacher from home (cutting out items or typing).
4. **Participation in PAT:** Parents have been enrolled in PAT for at least 10 months and received services at least 6 times during the ten months of enrollment from a certified Parents as Teachers educator.

5. **Formal schooling:** Children that are at least 4 years of age and were enrolled in a public or private pre-kindergarten or kindergarten program.

6. **Family characteristics:** Demographic information included ethnicity, parent’s age, and household income status. Family characteristic such as the number of parents living in the household, parents’ educational level, employment status, and number of people living in the household were used as descriptive data.

**Delimitation of the Study**

In order for a parent or caregiver to qualify for this study, they must have been participants in a PAT program in Mississippi for at least 10 months with services provided at least 6 of those 10 months by a certified Parent as Teachers educator prior to formal schooling. Formal schooling consisted of a pre-kindergarten program for children who had reached age four before September of any given school year or a kindergarten program for children who had reached the age of 5 before September of any given school year. This factor limited the number of families that had the number of months of service required while participating in the PAT program and who had children enrolled in formal schooling. Therefore, the number of qualified families that were to meet these criteria was considered a delimitation for this study; however this study was based upon the assumption that the sample group for both the PAT programs and parents who had not participated in PAT represented the larger population.
Literature Review

Reading Reform Efforts Advancing Parent Involvement in Mississippi

The immeasurably adverse psychological and social costs to families with children who experience school failure propelled this literature review to examine involvement in early family literacy programs in general, as an intervention strategy for school improvement and its impact on parental involvement. Next, this review examined the impact of parent involvement on student achievement. This literature review’s primary focus concerned the impact involvement in Parents as Teachers has on parental involvement in a child’s education. Finally, this review focused upon the PAT Program particularly in regards to whether involvement in PAT was instrumental in building better partnerships between education and families throughout their child’s educational process.

The latest research on early family literacy intervention programs in efforts to increase parent involvement and student achievement in school was gaining momentum in the educational setting and in child development and educational literature in regards to school reform efforts. As a result of national and state initiatives for school change and the growing body of research on academic and social problems associated with incessant poor school performance, more emphasis had been given to early childhood and family literacy programs in Mississippi.

Amstutz (2000) stated four federal laws had given definition to family literacy programs. These laws were the Reading Excellence Act, Elementary and the Secondary Education Act, the Workforce Investment Act, and the Head Start Act. At the core of each were “services of sufficient intensity in terms of hours and of sufficient duration to
make sustainable changes in a family, and these programs integrate all of the following activities:

- Interactive literacy activities between parents and children.

- Training for parents regarding how to be the primary teachers for their children and how to be full partners in the education of their children.

- Parent literacy training that leads to economic self-sufficiency.

- An age-appropriate education to prepare children for success in school and life experiences. (para. 1)

In 1998, the Mississippi Congress established *The Reading Excellence Act* designed to ensure that every child would be able to adequately read by the end of third grade. The Act read:

The Reading Excellence program was designed to provide children with the readiness skills and support they need to learn to read once they enter school; teach every child to read by the end of the third grade; and use research-based methods to improve the instructional practices of teachers and other instructional staff. (Section 2251, Purposes section)

The primary activities of the *Reading Excellence Act* were professional development, tutoring programs, family literacy, and transition programs for kindergarten students.

The Mississippi Department of Education’s *Reading Assessment and Intervention Strategy Exploration* (RAISE) training program was established to assist Mississippi educators in helping every child in Mississippi with reading skills. At the core of this training model was the Mississippi Reading Reform Model (MRRM). This model formulated the fundamental building blocks of the Mississippi Reading Initiative—*Every
Child a Reader. The training manual illustrated how the model had been incorporated into an all-inclusive process of prevention and intervention. Components of the reading model included “(a) Reading Instructional Intervention Process, (b) Extended Instructional Opportunities, (c) Parent-Family Literacy Programs, (d) Early Literacy Intervention, and (e) Effective Instructional Practices for Teachers, Administrators, and Support Staff” (p. 7). The framework for successfully implementing the Mississippi Reading Reform Model included:

- Well-designed prevention programs to promote students' development of appropriate language-related readiness skills for early literacy through Pre-Kindergarten and parent-family centers.
- Expanded parent-family literacy programs and community support (Reading Assessment and Intervention Strategy Exploration [RAISE], n.d., p. 7)

On January 8, 2002, The 107th Congress reauthorized the 1965 Elementary and Secondary Education Act (ESEA) when President George W. Bush signed into law the No Child Left Behind Act of 2001 (2002a). It was described as the “most sweeping reform” of the ESEA since its enactment. “It redefines the federal role in K-12 education and will help close the achievement gap between disadvantaged and minority students and their peers” (2002b, Reauthorization of the ESEA Legislation and Policies Website, para. 1). The Executive Summary of NCLB stated that more emphasis would be placed on reading readiness skills for preschool children (2002c, para. 4), and NCLB is committed to ensuring every child will be able to read by the end of third grade (2002c, Putting Reading First section, para. 1).
The Preliminary Overview of Programs and Changes regarding the Reading First State Grants of NCLB (2002d) replaces the Reading Excellence Act of 1998 and extends funding for early literacy programs from three years to six years for preschool children, particularly those from low-income families (NCLB, 2002d, Reading First State Grants, Title I, Part B, Subpart 1, Overview section, para. 1). NCLB’s Early Reading First is designed “to provide preschool children with cognitive learning opportunities in high-quality language and literature-rich environments, so that the children can attain fundamental knowledge and skills necessary for optimal reading development in kindergarten and beyond (2002e, Title 1, Part B, Subpart 2, Sec. 1221, Purposes, (2) section). The section of NCLB referring to parent involvement describes how the local educational agency develops policies to

Coordinate and integrate parental involvement strategies under this part with parental involvement strategies under other programs, such as the Head Start program, Reading First program, Early Reading First program, Even Start program, Parents as Teachers program, and Home Instruction Program for Preschool Youngsters, and State-run preschool programs. (2002f, Section 1118, Parental Involvement, Part (2), (D) section)

In response to the passage of NCLB, Mississippi Department of Education (MDE) drafted a plan for student achievement and teacher improvements called Improving Teacher Capacity and Student Achievement, Mississippi’s plan for student achievement in accordance to the No Child Left Behind Act of 2001. The plan encompassed eight components that guided the efforts within Mississippi to improve education. “The MDE eight key priorities were 1) reading, 2) early literacy, 3) student achievement, 4) teachers
and teaching, 5) leadership and principals, 6) safe and orderly schools, 7) technology, and 8) parent involvement" (pp. 1-2). For the eighth component of the plan, parent involvement, the Mississippi State Board of Education recognized “the critical role that parents play in children’s education...[and]...is striving to provide parents with resources and trainings that will enable parents to increase meaningful involvement in their children’s education” (p. 11).

Other steps Mississippi has taken in recent years to strengthen reading skills among elementary students were The Mississippi Reading Sufficiency Act of 1999 (1999, S. 2656), and a Parents as Teacher’s Pilot Program (1999, S. 2609). In response to the enactment of Senate Bills Nos. 2656 and 2609, the Reading Excellence Act (1998) and the new No Child Left Behind Act of 2001 (2002) with the Mississippi Department of Education’s plan, Improving Teacher Capacity and Student Achievement, and the RAISE training with the Mississippi Reading Reform Model at its core, it was worthwhile to consider the impact the early childhood parent education and family literacy support program, Parents as Teachers, had on families from lower socioeconomic backgrounds.

Socioeconomic Status, Race and Age of Parents Influencing the Need for Early Parent Support Programs

Over the past twenty-five years, one of the largest groups of individuals living in poverty in America was children. In a 1999 article that estimated the proportion of children in America who would experience poverty at some point in the seventeen years of childhood, Rank and Hirschl reported that in 1998, 14.1 million people living in poverty in America were children. Furthermore the authors reported that, “during the 17 years of childhood, 69% of Black children, 81% of children in nonmarried households,
and 63% of children whose head of household had fewer than 12 years of education” would be touched by poverty.” They also found that “by the age of six, 57% of Black children will have experienced at least one year of poverty, compared with 15% of White children”.

According to the National Campaign to Prevent Teen Pregnancy, the United States had the highest rates of teen pregnancy rates “with nearly half a million teen births each year” and “compared to women who delay childbearing, teen mothers are less likely to complete high school and are more likely to end up on welfare” (Halfway There: A Prescription for Continued Progress in Preventing Teen Pregnancy, 2001, p. 1). According to the February 2002 publication entitled Not Just Another Single Issue: Teen Pregnancy’s Prevention’s Link to Other Critical Social Issues, sponsored by the National Campaign to Prevent Teen Pregnancy, for the first time in 20 years the level of teen pregnancy rates were at their lowest in this country. However, “Hispanics, the fastest growing ethnic group in the nation...now have the highest teen birth rate nationally” (p. 3). In addition, the report stated that “seventy-nine percent of births to teen mothers are out-of-wedlock,” (p. 3), and “fifty-two percent of all mothers on welfare had their first child as a teenager,” (p. 5). This publication went on to report that the children born to teen mothers were more likely to do worse in school than children born to older parents, and that these children were “fifty percent more likely to repeat a grade, are less likely to complete high school...and have lower performance on standardized tests” (p. 6).

Over 30 years of research efforts indicated that children from lower socioeconomic backgrounds entered school lagging behind their peers in school readiness skills. These circumstances elevated a risk for high retention rates in the elementary and
middle school years. Numerous studies had shown the adverse consequences of poor performance and its increased risk for high school dropout, a continuous state and national concern. In the FDCH Government Account Report, Shaul, Director of Education, Workforce and Income Security Issues, stated, “about 30 percent of federal and 40 percent of state prison inmates are high school dropouts thus imposing a considerable cost on all levels of government” (2002, Background section, para. 1). Peck et al. (1987), stated, “Increasingly, it is being recognized that the issues of dropping out and dropout prevention cannot be separated from issues affecting our total economic and social structure. These include poverty, unemployment, discrimination, the role of the family, social matters, the welfare cycle, child abuse, and drug abuse” (p. 3). Shaul (2002) went on to report, “Over the last decade, between 347,000 and 544,000 10th-through 12th-grade students dropped out of school each year...These dropouts earn lower incomes, are more frequently unemployed, and have more limited job opportunities...are more likely to receive public assistance...and make up a disproportionate share of the nation’s prison and death row inmates” (para. 1). For students coming to school lagging behind their peers, suffering from poor academic performance for a number of years that may eventually lead to school dropout, the value of implementing comprehensive early family support programs within the local educational agency as one component of the services extended to constituents of school districts could not be underestimated.

In the article, “Reducing the Dropout Rate,” Woods (1995) reported that the “single strongest school-related predictor of dropping out” was poor academic performance primarily with students who were retained one or more grades (Risk Factors section, para. 2). These students were twice as likely to drop out of school. The author also noted,
“parents play a crucial role in keeping young people in school. The degree and nature of family support are determined by such factors as stressful/unstable home life, socioeconomic status, minority membership, siblings’ completion of high school, single-parent households, poor education of parent” (para. 4). Furthermore, Woods maintained that, “of the community-related factors, it is poverty that is the strongest predictor of dropping out” (para. 5). Based upon these findings, it was apparent that early intervention programs targeting low income families could help to offset the negative impact that poverty had on student achievement by helping families better prepare their children for school success in the early developmental years before they entered formal schooling.

A U.S. Census Bureau report prepared by Curry et al., (2001) entitled School Enrollment in the United States—Social and Economic Characteristics of Students: Population Characteristics, reported one-fourth of the U.S population was enrolled in school (p. 1), but this percentage did not include a large number of children from low-income families. The description of school in this report extended from nursery school to graduate school as the report noted:

Since nursery school is not part of the regular public school system in most areas and is predominantly private, the cost of attending may prevent some families from enrolling their children. Thus, nursery school attendance is closely linked to family income, even though Head Start and other locally funded nursery school programs are available to some children in low-income families. In 1999, 58 percent of 3- and 4-year-olds from families with incomes of $40,000 or more attended nursery school, compared with 41 percent of those from families with incomes less than $20,000…Nursery school enrollment is also related to the
education and labor force participation of a child's mother. Children of mothers who are college graduates were more likely to attend nursery school than children whose mothers did not finish high school (66 percent compared with 34 percent).

For many low-income children, participation in childcare programs is not possible. The 1991 Peth-Pierce report for the National Institute of Child Health and Human Development (NICHD) in *The NICHD Study of Early Child Care* on the prediction of poverty on childcare experiences found that families living in poverty were not as likely to use any childcare. "In general, children from families in poverty who were cared for in home settings (by a child care home provider or family member) received relatively low-quality care" (Does Poverty Predict the Child Care Experience? section, para. 5). The studies indicated there was a need for more early intervention or family support programs to counter the negative impact poverty has on the child's learning for the most needy of families in our society.

According to the 2000 U.S. Census Bureau's report, *Supplementary Survey Profile: Population and Housing Profile: Mississippi*, 28 percent of the total population count was under 18 years of age (Population and Housing Profile: Mississippi section, para. 6). Twenty-six percent of the total Mississippi population had less than a high school diploma (The Educational Attainment of People in Mississippi in 2000 graph). Children under the age of 18 years comprised 25 percent of the poverty rates, and 37 percent of the total households were headed by single females (Poverty Rates in Mississippi in 2000 graph). Furthermore, in the U.S. Census Bureau's Small Area Income and Poverty Estimates data showed that of the more than two million Mississippians,
188,272 people under the age of 18 lived in poverty with 58,311 of those people under age 5 (State and County Quickfacts: Mississippi, 2000). The data from the U.S. Census report illustrated that Mississippi had a large number of children living in poverty and many of these children were not receiving family intervention services that would offset the negative impact poverty had on children entering school ready to learn.

As reported in Mississippi’s Interagency Coordinating Council for Early Childhood Programs Report, 38,465 families with children in the age range of birth to 7 were receiving either Head Start, Early Head Start, or Special Education Pre-school services and/or the parent and family support services of Even Start or Parents as Teachers in Mississippi (Antoon et al., 2002, pp. 8-81). Of the 38,465 families served, most of the children were in the 3 years of age and above category, indicating very few families with children birth through 3 were receiving important family support services and early literacy support across the state.

Clearly the data suggested a gap in the educational opportunity and services children under the age of five received in households of lower socioeconomic status on a state level. More specifically, the lack of blended, systemic and state-wide early childhood programs for all 58,311 Mississippi children under age five living in low socio-economic households continued to contribute to the state’s educational, economic, and social shortcomings.

The research community’s extensive work in identifying the impact of poverty, the lack of access to family support services, the lack of early literacy support, and the lack of participation in affordable childcare programs as factors that contributed to the academic gap that all too often led to high retention rates and school dropout rates had
recently propelled legislators and policy makers to examine early childhood intervention programs designed to provide families the support needed to help children experience a better start in life so that these children would enter kindergarten ready to learn. “It is sad to admit that the inequality allowed to exist in the richest nation in the world means that children enter kindergarten with backgrounds that differ widely in the preparation they provide for learning. These gaps are present on the first day of school, and, so far, most schools have not figured out how to close them” (Lewis, 2001, para. 2).

Overview of Early Childhood Programs and Intervention Services

For the past two centuries, child development theorists and researchers that had impacted childhood development practices stemmed from three basic theories: the Calvinist doctrine which advocated strict parenting and obedience, the view by Rousseau, Pestalozzi, and Froebel that children were basically good and the family’s care was central to the child’s development, and finally John Locke’s view that children were influenced by their natural environment. In the early part of the twentieth century, parent education programs flourished and educational, social, and emotional health became the focus for child care development. In the decade of the 1960s, research efforts established that early childhood education was beneficial, and in 1965, Head Start was established with a strong emphasis on parent participation (Berger, 1991). In 1977, Gordon pointed out three themes parent education programs shared. The three themes included “(1) the home is important and basic for human development; (2) parents need help in creating the most effective home environment for that development; and (3) the early years of life are important for lifelong development” (p. 72). By the 1980s and 1990s, schools began to actively respond to the need for parent participation in the education of their children by
establishing such home-to-school programs as Home-Oriented Preschool Education (HOPE), Missouri's New Parents as Teachers program, Boston's Brookline Early Education Project, and the Minneapolis Early Childhood Family Education Program (Berger, 1991).

The World Bank Group, a worldwide funding source for developing assistance programs to some of the world's poorest people, supported a project called Early Child Development. According to their data and evaluations of well-conceived programs, children in high quality early intervention programs tended to be more successful when they enter formal schooling. Their evaluations also indicated children receiving services in intervention programs “are more competent socially and emotionally, and show higher verbal and intellectual development during early childhood than children who are not enrolled in high quality programs” (Why ECD-Operational Studies-Benefits: The Benefits of Quality, U.S. ECD (Early Childhood Development) Programs, Benefits section, n.d., para. 1).

The NICHD Study of Early Child Care, prepared by Peth-Pierce (1991), claimed to be “the most comprehensive child care study to date in the U.S.” (para. 1). The study followed 1,364 children from diverse family backgrounds throughout their first 7 years of life (para. 1) Almost 35 percent of the families lived in poverty (a Description of Child Care in the NICHD Study section, para. 4). The characteristics of either high or low quality child care were determined primarily by the frequency of interaction and the quality of interaction between the child and the care giver. Other characteristics included “group size, child-adult ratio, physical environment” and “the care giver's...formal
education, specialized training, child care experience, and beliefs about child rearing” (para. 10).

The research team found that child care situations with safer, cleaner, more stimulated physical environments and smaller group sizes, lower child-adult ratios, and care givers who allowed children to express their feelings and took their views into account, also had care givers who were observed to provide more sensitive, responsive, and cognitively stimulating care—quality of care that was expected to be associated with better development outcomes for children. (para. 11)

The NICHD studies went on to report that higher quality care was correlated to: “(a) better mother-child relationships, (b) lower probability of insecure attachment in infants of mothers low in sensitivity, (c) fewer reports of children’s problem behavior, (d) higher cognitive performance of children in child care, (e) higher children’s language ability, and (f) higher level of school readiness” (Pierce-Peth, 1991, Summary section, para. 6).

The National Research Council (NRC) established the Committee on Early Childhood Pedagogy in 1997 to review and synthesize the applications of leading research and the state of the nation’s early childhood education and care of children. Their findings published in the 2000 Eager to Learn: Educating Our Preschoolers publication, stated, “The growing consensus regarding the importance of early education stands in stark contrast to the disparate system of care and education available to children in the United States in the preschool years” (Bowman et al., 2000, p. 2).

Addressing quality in childhood education and intervention programs, the NRC Report observed there were many dimensions to early childhood education. Much of the
research in the past few decades had focused upon center-based preschool programs. Center-based programs in this context include nursery school or day care centers where children received care by an adult other than their parent. Only in recent years had the research focused more specifically on the study of children’s development and their learning in such cognitive domains as reading, mathematics, and science (Bowman et al., 2000, p. 7). The NRC also reported that as enrollment in early childhood education programs increased, use of assessments and tests could increase. They cautioned that assessments, particularly those used for accountability, would need to be used carefully and appropriately if they were to address educational challenges (p. 9).

Rudner’s 1996 review, The Early Childhood Program Research and Evaluation, examined “the consistency to literature on the cognitive development of infants and toddlers” (ERIC Digest, para. 3) in regards to early intervention programs. Rudner cited Lewis and McGurk who wrote in their classic 1972 article in Science that infant development scales were not suitable instruments for assessing the influence of specific intervention programs (Recommendations section, para. 1). Rudner went on to point out that, “Few early childhood programs seek to improve overall intelligence or to hasten the general cognitive development of infants and toddlers. Rather most programs seek to provide interventions for specific identified needs, either for the family or for both. The typical early childhood program can be accurately viewed as a collection of individually tailored programs” (para. 2).

To refer to early childhood intervention programs in the present time as strictly center-based educational programs alone was a misnomer. Addressing the conflict between the concept of childcare and preschool as two separate bodies of services, the
National Research Council asserted "that care and education cannot be thought of as separate entities in dealing with young children" (Bowman et al., 2000, p. 2). The broad description of early childhood services covered a myriad of child and family services aimed at addressing an equally vast array of family needs. Early intervention and childhood services included educational and developmental services, family support services, nursing, social work services, and physical, occupational, or speech therapy for children with disabilities or developmental delays. "It is also important to note that many of the committee's [NRC] findings, especially those on children's learning and development, are likely to apply to in-home settings and to parents who care for their own children, and they should also be of interest to family literacy and two-generation programs" (Bowman et al., 2000, p. 3).

In the kindergarten through twelfth grade public education arena, early intervention programs primarily referred to two basic concepts, "a) a focused instructional literacy program in kindergarten through second grade with the goal of successful reading by the third grade, and b) increased parent involvement." (Denti & Guerin, 1999, Successful Early Intervention Programs section, para. 1). Closely related to early childhood intervention programs were early family literacy programs, which were "combined services in early childhood education, adult basic skills education, and parental education" (Amstutz, 2000, para. 1).

**Early Family Literacy Movement in Education**

Research supported that by examining students' third-grade reading skills, future dropouts could be predicted with remarkable accuracy. Still, another study found that failure to acquire adequate literacy skills in the early years set in motion an increased risk...
for school dropout (Kelly, Veldman, & McGuire, 1964; Lloyd, 1978; Slavin, Karweit, & Wasik, 1992-1993, cited by Denti & Guerin, 2000, Elementary School Literacy and Reading Needs section, para. 1). In the 1999 U.S. Department of Education report, American Reads Challenge, it called for a national crusade in which “every American child must become a good reader by the end of third grade” (p. 16). This report, Start Early, Finish Strong: How to Help Every Child Become a Reader, cited U.S. Education Secretary Richard W. Riley’s observation that

For the 38 percent of fourth-graders, access to the world of words is endangered because they read below the Basic achievement level, lacking even partial mastery of the reading skills needed for grade-level work ...By eighth grade, 26 percent of the nation’s students continue to read below the Basic level set for that grade and by twelfth grade, 23 percent remain below the Basic level. The latter figure, of course, does not include students who dropped out before grade 12 due to poor literacy skills. These struggling readers are disproportionately from families living in poverty....In fourth grade, 64 percent of Blacks and 60 percent of Hispanics read below the Basic level, compared with 27 percent of Whites....It is not surprising that more than 95 percent of high school dropouts score at the two lowest levels of reading proficiency on national assessments. (pp. 18-21)

Denti and Guerin (1999) contended that enhancing early literacy efforts in schools to increase literacy rates by third grade reduced the potential for school dropouts. Since “poor reading is one of the most common characteristics of school dropout [and] the seeds for reading failure are set in the primary grades, dropout prevention needs to begin in those grades” (Elementary School Literacy and Reading Needs section, para. 1). They
went on to say, "The research on early literacy calls for a renewed contract between
school and home if students are to learn to read at grade level by the third
grade...Moreover, a necessary part of support for early literacy rests with the family.
Shaping a positive home environment that values reading and writing can result in
children making measurable academic gains at school." (1999, Successful Early
Intervention Programs section, para. 3).

In "Family, Literacy, Development and Culture: Interconnections,
Reconstructions," Bhola (1996) stated, "The democratic ideology of our times has
compelled us to consider literacy as a human right and a public good" (New
Understandings of Literacy section, para. 1). The theories and practice of family literacy
in America had undergone a conceptual expansion to include a wider variety of offerings
in efforts to impact the reading abilities of all family members.

Asselin's 2001 article, "Home-School Connection," listed the following features
of family literacy according to the 1994 International Reading Association Commission:
family literacy "a) encompasses the ways parents, children, and extended family
members use literacy at home and in their community, b) occurs naturally during the
routines of daily living, c) may be initiated purposefully by a parent, or may occur
spontaneously, d) reflects the ethnic, racial, or cultural heritage of families involved, and
e) may be initiated by outside institutions or agencies" (para. 2). According to Hendrix
(1999-2000), "Family literacy is an educational and public policy effort to join early
childhood and adult literacy education" (para. 2).

The U.S. Department of Education National Center for Education Statistics
(NCES) sponsored a series of reports based on findings about young children's
experiences in kindergarten and early elementary grades called the *Early Childhood Longitudinal Study, Kindergarten Class of 1998-1999 (ECLS-K)*. The third report, *Children's Reading and Mathematic Achievement in Kindergarten and First Grade*, issued in 2002 by researchers Denton and West, found that children who began kindergarten with readiness skills seemed to be at an advantage (p. 25). Children who demonstrated early literacy skills and who came from a positive literacy environment, who possessed a positive approach to learning, and who enjoyed very good or excellent health seemed to perform better after one and even two years of formal schooling than children who did not have these resources (p. xii). They also found that children who recognized their letters when they entered kindergarten scored in the top quartile in reading. Additionally, children who were read to at a minimum of three times a week were almost twice as likely to score in the top quartile in their reading scores as children who were read to less than three times a week (p. 16). The study also revealed that children “from nonpoor families are more likely to recognize words by sight” than children from poor families, and “White children are more likely than Black or Hispanic children to recognize words by sight [and] understand words in context (p. x).

In the 1993 book, *An Observation Survey of Early Literacy Achievement*, Clay observed that

It is a widely held view that learning to read and write in school will be easier for the child with rich preschool literacy experiences than it is for the child who has had few opportunities for such learning...At entry to school children have been learning for five to six year, since they were born. (pp. 5-6)
This work contributed to the argument that families take a more prominent role in incorporating literacy activities within the home environment during a child’s developmental years well before entry into school. Furthermore, Clay maintained that it is in the home where the quantity and quality of language interaction is the more important factor in contributing to literacy acquisition than the external factor of socioeconomic status.

This argument was given a voice in the Barbara Bush Foundation for Family Literacy. The mission statement of the Foundation was “to establish literacy as a value in every family in America by helping parents everywhere understand that the home is the child’s first school, the parent is the child’s first teacher, and reading is the child’s first subject; and to break the intergenerational cycle of illiteracy by supporting the development of literacy programs that build families of readers” (cited by Bhola, 1996, Family Literacy in the American Setting section, para. 2). Hendrix (1999-2000) made the same assertion that the basic premise of the family literacy approach was that parents were their children’s first teachers and they were the teachers that children would have for the longest time (para. 2).

Studies indicated that the single most important factor in assuring early student success was consistent parental involvement in the child’s education throughout life (Epstein, 1991, 1995; Henderson & Berla, 1994; Lewis, 2001; U.S Department of Education, Strong Families, Strong Schools, 1994). “Studies of early intervention programs initiated in the 1960s showed parent involvement in their child’s learning to be key to the child’s success” (Hoelker & McGilly, 1999, p. 1). The overwhelming evidence of research illustrated that involved parents help children learn better; therefore, family
literacy programs "should encompass the concept of a partnership between the school and the parents" (Bagin, Gallagher, & Kindred, 1997, p. 123).

Carey, Farris, and Lewis (1998) published a report called *Parent Involvement in Children's Education: Efforts by Public Elementary School*. The authors stated, "increasing family involvement in children's learning has become a special focus in school reform acts. Findings from this survey suggested schools were making efforts to encourage and accommodate parent participation in school programs" (p. 28). Davies (2002) observed that parent involvement became a crucial issue in the educational community in the last decade since accountability models and standards-driven assessments had been in the driving seat for developing laws and policies for educational reform. "It seems that everybody talks about, studies, and advocates parent and family involvement. The 'whole village' idea is widely embraced, and 'partnership' has become a mantra. There is hardly a politician, educational leader, organization, or conference that doesn't highlight in some way families, parent involvement, and partnership" (para. 3).

This trend reflected in Mississippi's own reform efforts was evidenced by the Mississippi Department of Education placed early literacy and parent involvement as two of their eight priorities in the plan submitted in accordance to the *No Child Left Behind Act of 2001*. In the plan it stated, "The MDE recognizes that parents are children's first and most important teachers" (p. 3) Educators were cautioned that when considering the time, money and effort required to develop partnership programs that deliver measurable increases in student achievement, they must include the following components: "1) carefully designed, with the participation of all those affected by them; 2) based
whenever possible on research evidence; 3) faithfully executed; 4) objectively evaluated; and 5) sustained over time” (Davies, 2002, para. 9).

A 1994 U.S Department of Education report *Strong Families, Strong Schools* cited Henderson and Berla (1994) who contend, “When families are involved in their children’s education in positive ways, children achieve higher grades and test scores, have better attendance at school, complete more homework, demonstrate more positive attitudes and behavior, graduate at higher rates, and have greater enrollment in higher education” (Family Involvement, para. 1) The report also noted that schools with high poverty concentrations and minority enrollments indicated they had less parent involvement than schools that had lower poverty concentrations and minority enrollments. However, the report cited results from several leading researcher’s work on the impact of poverty and parent involvement such as Walberg (1984), Coleman (1966), Epstein (1991), and many others and declared that, “What families do to help their children learn is more important to their academic success than how well-off the family is” (*Strong Families, Strong Schools*, 1994, Family Involvement, para. 5). Furthermore, the report cited Barton and Coley (1992) who stated “controllable home factors account for almost all the differences in average student achievement across states” (*Strong Families, Strong Schools*, 1994, Key Research Findings, para. 1).

Further studies confirmed the 1994 U.S Department of Education report. “Research conducted by staff of the Southwest Educational Development Laboratory states that some parent involvement programs have produced effects on student achievement ‘ten times as that of socioeconomic status’” (Woods, 1995, School section, No. 9). One of the elements of successful parent involvement programs included a sense
of partnership between the parent and the school that "involves more than exchanging information with parents and acquainting them with the school. It includes cooperative work on problems that affect children and advance the cause of education. Nothing else produces in parents a better understanding of the school and a deeper sense of responsibility for its progress" (Bagin et al., 1997, p. 124).

In spite of all the research and the advances in awareness for the potential of student success through development of strong school-to-community partnerships through early literacy intervention programs, there continued to be disparities in parent involvement among minorities and low socioeconomic families (Becker & Epstein, 1982; Lareau, 1989). These parents are less likely to be involved in school activities and are less likely to meet with teachers (McNeal, 2001, Conclusion section, para.3). McNeal also pointed out more research was needed to address how social and cultural capital, primarily networking with parents, contributed to parents' understanding of the schooling process, in addition to understanding educational language when contacting school personnel. Networking with other parents was shown to be "a significant determining factor in a child's school performance, especially for upper-middle class children" (Introduction section, para. 2). Studies on social networking with upper-middle class families "can be utilized to improve school involvement for minority families. Furthermore, there is a need for more research in ways that schools could address how these concepts affect achievement in the early grades" (Conclusion section, para. 5). Sheldon’s 2002 study indicated parents’ social networks do matter in parents’ level of involvement but not necessarily the size of the network. "It may not take a large or extensive network to promote and encourage parent involvement. The average parent
network involved approximately two parents...Connecting an isolated parent with one or
two other parents as a strategy to increase involvement at home or school may be a
promising avenue for schools that desire greater connections with families” (p. 313).

Jones (1988) responded to the question, “Why Not Leave Education to the
Schools?” in the book, Parents Are Teachers, Too, by pointing out that “parents can
leave it to schools to teach their child how to read or count or write his name...how to
skip or hit a baseball...But a child’s best educational opportunities and future growth
depend on the combined effort of parent, teacher, and student. *The greatest contribution
on the part of the parent should come before the child ever begins his formal education*
[Italics are the author’s emphasis] (p. 11). Efforts to build partnerships between schools
and parents were continuing to build momentum as more and more researchers and
educators came to terms with the opinion that student success could not and should not
wait until the child enters kindergarten. Leach (1997), in the book Your Baby & Child:
*From Birth to Age Five*, comments,

While schools are vital as main sources of academic learning and scaffoldings of
children’s intellectual growth, they are not, cannot and should not be the focal
point for every aspect of their lives. Schools are institutions; as such they cannot
stand in for family or for community in children’s lives, nor do their best for
children in isolation from their homes. School and homes, teachers and parents,
share the culture that soaks into children. (p. 552)

Research has shown many parents benefit from family support programs that provided
networking opportunities and that promoted strong literacy skills in assisting families
with efforts to help children with school readiness skills.
Research Results of Missouri’s Parents as Teachers

An initial study of the New Parents as Teachers program in 1985 by Pfannenstiel & Seltzer reported on the effectiveness of New Parents as Teachers involvement after the initial implementation of the pilot program in 1981 (PATNC, n.d.a, Research and Evaluation). The findings released in 1985 indicated that NPAT children scored higher on all measures of intelligence, were more developed socially, and NPAT parents were more knowledgeable (Pfannenstiel & Seltzer, 1985). In 1984, Missouri passed the Early Childhood Development Act that required school districts to “provide parent education and developmental screening from birth to kindergarten entry” for all children. In 1985, Missouri implemented a statewide Parents as Teachers program for families with children birth to three years of age (PATNC, n.d.b, History, para. 11-12).

A follow-up study was conducted in 1989 to further substantiate the initial findings with the NPAT children as they completed first grade (PATNC, n.d.a, Research and Evaluation). Again, the children scored higher on standardized measures of reading and mathematics tests, and parents “were twice as likely as parents of comparison children to participate in activities at their child’s school, and significantly higher proportions of NPAT parents initiated contacts with their child’s teachers, thereby taking on a more direct and proactive role in their child’s education” (Pfannenstiel et al., 1996, p. 1). As a result of these early findings, Missouri renamed the program Parents as Teachers and broadened the participation to all parents of young children (PATNC, n.d.b, History).

In a September, 2000 publication entitled, A Select Review of Past and Current Evaluations of the Parents as Teachers Program prepared by McGilly, the review
summarized eleven independent evaluations of the impact PAT had on child development and parental benefits. The review reported on an independent study conducted in 1991 called *Second Wave Study of the Parents as Teachers Program*, by researchers Pfannenstiel et al., to measure the statewide transfer of this model program. In this study the researchers found “PAT children performed significantly above the national norms on measures of intellectual abilities...more than on-half of the children with observed developmental delays overcame them by age three [and] parent knowledge of child development and parenting practices significantly increased for all typed of families” (McGilly, 2000, p. 3).

Pfannenstiel et al., conducted *The Parents as Teachers Longitudinal Follow-Up to the Second Wave Study* in 1996 as the children involved in the Second Wave Study completed their kindergarten year in school (p. 4). The study focused on PAT children’s performance in school and on their parents’ involvement in school: Results indicated “PAT children scored higher on measures of complex and challenging tasks than comparison children...[and] the PAT parents demonstrated high levels of school involvement, which they frequently initiated, and supported their children’s learning in the home” (McGilly, 2000, p. 5). Furthermore, “teachers reported that 75 percent of PAT parents always [the authors’ emphasis] assisted with home activities related to schoolwork” (Pfannenstiel et al., 1996, p. 6).

The Research and Training Associates, Inc., in Overland Park, Kansas conducted an independent study coordinated by the University of Missouri-Columbia in 1998. Pfannensteil and Barr published the findings in 1999 in the report called the *Missouri School Entry Assessment Project*. The study involved 3,500 kindergarten children from a
random sample of Missouri schools. Over 3,100 parents completed a survey concerning data about children’s health, their education and the family’s literacy experiences prior to kindergarten. On the parent survey, parents were to indicate “whether their child had experienced or participated in each of the following prior to kindergarten: Parents as Teachers... First Steps, Early Childhood Special Education, Early Head Start, Head Start, public preschool, private preschool, child care at a center, parent care at own home, child care at own home, and child care at another private home” (2). The following was a summary of the Pfannenstiel and Barr findings:

- When Parents as Teachers (PAT) is combined with any other pre-kindergarten experience for high-poverty children, the children score above average on all scales when they enter kindergarten.
- The highest performing children participated in PAT and preschool or center care. Among children who participate in PAT and attend preschool, both minority and non-minority children score above average. Children in both high-poverty and low-poverty schools who participate in PAT and attend preschool score above average when they enter kindergarten.
- Among children whose care and education are solely home-based, those whose families participate in PAT score significantly higher.
- Special needs children who participate in PAT and preschool in addition to an early childhood special education program are rated by teachers as being similar in preparation to the average child.
- Head Start children who also participate in PAT and another preschool score at average or above when they enter kindergarten. (p. iii)
According to the Parents as Teachers National Center’s web page called School Readiness Study (n.d.c) highlighting the results of this study, the “children rated as ‘above average’ in school readiness lived in homes where parents reported above-average levels of literacy-related activities. Those parents read to and with their children. These results confirmed the importance “of home literacy activities, something the PAT program stresses and encourages with all families” (para. 7).

Overall, the studies “indicate that the program helps parents gain knowledge of child development, good parenting practices, and confidence in their parenting skills. It also helps families raise well-rounded and competent children who are on the right track for achievement in school and life. Specifically...PAT parents are more involved in their child’s schooling [and] parental involvement is key to a child’s success in school” (McGilly, 2000, p. 2).

Service Components of Parents as Teachers

PAT utilizes a “Strengths Model” design that focuses upon the strengths of the family to be their child’s best first teacher. The fundamental service components are (a) home visits delivered year-round by trained and certified parent educators, (b) group meetings with other families in the program, (c) periodic developmental screenings for children, and (d) referral services to community services for family needs beyond the scope of the PAT program. (Koprowski et al., 1999, Module One, p. 1-3).

The first component, the home visit by certified parent educators, is the foundation of the program’s delivery service. PAT educators are trained to use the Born to Learn curriculum (Koprowski et al., 1999; Koprowski & Kostlec, 1999) during home visits in a birth through age three pre-service institute. A cadre of PAT trainers from
Parents as Teachers National Center, Inc with various professional backgrounds ranging from childhood education and development to social work to nursing conduct the initial, six-day training institute (Hoelker & McGilly, 1999, p. 5). All PAT educators are evaluated annually with satisfactory performance for re-certification and are required to complete twenty in-service hours to maintain the first annual credentialing. Educators must then acquire fifteen contact hours of professional training the second year and ten contact hours for each year thereafter (Hoelker & McGilly, 1999, p. F-43).

Beginning in 1999, the Born to Learn curriculum (Koprowski et al., 1999; Koprowski & Kostlec, 1999) was introduced to PAT educators and was designed to link “neuroscience and education to improve the parenting of young children” (p. 7). The curriculum was developed collaboratively by a team of neuroscientist from Washington University School of Medicine in St. Louis, Missouri and the Parents as Teachers National Center, Inc. The information was designed to provide parents the latest information concerning brain development and its impact on child behavior and the practical applications in daily parenting. The curriculum was developed for educators to plan home visits on a monthly format to meet the individual needs of families. Weekly or bi-weekly plans were used for families in crises or for those with special needs (Koprowski et al., 1999, Module One, p. PV-1).

The recent wave of neuroscience research, particularly since 1998, have produced controversial and often conflicting views as it applies to early childhood development and education. In his article called, “What Recent Brainresearch [sic] Tells Us about Learning,” Wesson (2001) stated:
The most recent advances in the fields of molecular biology, neuroanatomy, medicine, brain-imaging, genetics, and the numerous branches of the cognitive neurosciences that are emerging today permit us to take a closer look at the chemical, functional, and structural aspects of the neurophysiological correlates of cognitive functioning and the neural events that regulate all of the components that go in to the makings of human learning. (p. 59)

Further, Wesson wrote that optimal learning began at the earliest stages of infancy and stimulation or the lack of stimulation had an impact on the brain’s synaptic connections that are key to optimal brain development (p. 72).

On the other hand, Elkind (2001), a leading researcher on early child development, cautioned childhood educators and care givers to move with caution when introducing stimulation to infants on the sole authority of recent brain research. “Before we make that enormous leap, we need to build some bridges between the electromicroscopic events of the brain and the life-sized happenings of human thought and behavior” (para. 16).

DiPietro (2000), a researcher for Johns Hopkins University, also cautioned that reliance on brain research in connection with finding the “right” early intervention program must be evaluated closely. The author was primarily focusing her definition of early intervention programs on center-based early childhood education programs (p. 464). In addition, the conclusions were that socioeconomic conditions and parenting styles impacted a child’s developmental outcomes more consistently than educational activities based upon the latest brain research (2000, p. 467).
In the Summer, 2002, newsletter, Parents as Teachers News, an article called "Building a Case for Early Childhood Advocacy," by Robben commented on Ramey and Ramey's *Right from Birth: Building Your Child's Foundation for Life Birth to 18 Months*, specifically on the brain research findings of the past two decades. Robben maintained that the popular belief of genetics as the primary regulators of human development, and the question this data presented in dispelling common misunderstandings about human development, gave "much evidence indicating that experience, [author's emphasis] or a child's environment, is also a very powerful contributor to human development—an idea not universally shared" (Robben, 2002, p. 1).

Although differing views were emerging concerning the application of new brain research findings, the Parents as Teachers' curriculum included brain research information as part of the curriculum; however, the primary focus of the curriculum is on fostering learning experiences and the parent-child relationship. In a Chicago field test, 250 at risk families received home visits where parent educators used the neuroscience enhanced *Born to Learn Curriculum* (Koprowski et al., 1999; Koprowski & Kostlec, 1999). These families were compared to a control group of sixty-five families who had received no home visits. The test found that the parents that received the home visits showed significant gains in child development knowledge, in parenting behaviors and in parenting attitudes (McGilly, Winter, & Strube, 2000).

Each home visit focuses upon four domains of individual development: the child's language, intellectual, physical or motor, and social-emotional. Information and activities are shared with parents so they can help their child develop to their highest
potential (Koprowski & Kostlec, 1999, Module Two, pp. PV-19-21). During the home visit, the PAT educator places a strong emphasizes on early literacy activities. Informational handouts for parents are written on two different reading levels and are used in conjunction with the material covered during the visit. There are five essential elements of a complete home visit: a) rapport-building with the parent, b) observation of the child with the parent and information that sharpened the parent’s observation skills of their child’s development, c) dialogue that addressed parenting issues skills, d) hands-on parent-child activities and book sharing that were developmentally appropriate and that promoted parent-child interaction, and e) a summarization of the key points of the visit with reminders for the parent to follow-up on the activities and information. (Hoelker & McGilly, 1999, pp. 18-19)

PAT educators have several issues they take into consideration when working with families and planning for the home visit. Some of these issues are working with families with multiple children of all ages and developing means to include all children in the visit; including fathers in the parent-child activities; working with adolescent parents; and working with families of children with special needs. PAT educators are to maintain written records of each home visit recording observations, activities, issues discussed, strengths of the family, and reminders for topics for subsequent visits (Hoelker & McGilly, 1999, pp. 18-19).

The second component of service delivery is the monthly group meetings. The purpose of group meetings is to provide a network and support group atmosphere for parents of young children. “Social networks are the set of social relationships and linkages one person has with other individuals. This context may be an important factor
related to the role parents take in their children’s education.” Furthermore, “Studies suggest that parents who maintain ties with other parents use them as a source of information and advice and that network ties can affect parent involvement” (Sheldon, 2002, pp. 303-304). PAT Educators, parents and childcare providers meet together to gain new insights on child development issues, share experiences, common concerns and success. Group meetings also provide opportunities to participate in child development activities and for parents to observe their child interact with other children. Formats for group meetings include parent-child interaction meetings, presentation meetings, and workshop meetings. Child development and parenting skills are at the core of each meeting (Hoelker & McGilly, 1999, p. 20).

The third essential component of the PAT program is the periodic screening of overall development, language, hearing, and vision using such instruments as (a) the Denver II screening instrument, (b) the Ages and Stages Questionnaire: A Parent-Completed, Child Monitoring System, (c) Battelle Screening Inventory, (d) Zimmerman Preschool Language Scale III, or (e) Early Language Milestones (Hoelker & McGilly, 1999, pp. 22-23). The goal is to provide early detection of potential problems that may inhibit learning and to prevent difficulties later in the child’s education and life. “Screening is a way to collect periodic information about a child that can provide parents with an increasingly clear picture of the child’s relative strengths and weaknesses” (p. 22). In some programs, the PAT educators are trained in the use of the screening instruments, and in others, community health agencies can be utilized to conduct the screenings. Goals of the screening process are to “review with parents their child’s developmental progress, provide parents with helpful information and guidance about
their child's development and emerging skills, identify developmental or health concerns as early as possible to assist with appropriate interventions, [and] help parents know what to expect next in their child's development” (p. 22).

Finally, the fourth component is establishing a resource network of service agencies for involving community linkages and collaboration. “Parents as Teachers is not intended to be the only service a family will ever need” (Hoelker & McGilly, 1999, p. 23). As family needs arise, the PAT educators serve as advocates to help the family access other community services that are beyond the scope of the PAT program. Goals of the resource network are to 1) link families with needed services, 2) collaborate with community resources, 3) form working relationships with organizations that had children’s interest as their missions, 4) share expertise with the community and become recognized early childhood family support program in the community (p. 23).

Building a PAT resource network is grounded in Maslow’s hierarchy of human needs. If basic needs go unmet, individuals can not attend to their higher levels of human needs. “If a family is hungry, or without shelter, they cannot focus on fostering their child’s development. Therefore, it becomes the job of the parent educator to develop and use her knowledge of the community network of resources to help families (Hoelker & McGilly, 1999, p. 63). Parent educators build skills in developing a directory of family service agencies, identifying families in crisis, networking with agencies to learn of service components, developing skills for dealing with challenging problems, practicing active listening skills to assess family needs, and responding to parent’s needs. The PAT program serves as “a referral source for existing agencies serving young families, and those agencies become referral sources for the PAT program” (p. 66).
Community resources that address family needs, particularly families with young children in Mississippi, include medical resources, public assistance, and education. The role of the PAT program is to build upon the strengths of the family and to serve as advocate when accessing community resources for addressing family needs. In 2002, Antoon et al., outlined the range of early childhood services and intervention programs offered in Mississippi in the *Report of the Early Childhood Services Interagency Coordinating Council*. Many PAT programs in the state network with the agencies listed in this report to coordinate efforts to serve families. Programs in 2002 that provided a pre-kindergarten, pre-school setting included twenty Head Start centers for 3 and 4-year-olds from low-income families, and 10 Early Head Start programs that provided services to children from birth to 3 years of age (p. 3). Together these programs served 25,573 low-income children (p. 73). Twenty-seven school districts in Mississippi used their Title I monies to fund programs that served 1,516 four-year-old children at risk for school failure in pre-kindergarten programs (p. 32). Pre-Kindergarten Special Education Programs, located in 153 school districts across the state served 7,068 preschool children with disabilities (p. 29). Additionally, 23 parochial school pre-kindergarten programs served 888 students. A total of 10,096 pre-kindergarten children attended programs sponsored throughout the state’s various school districts (p. 37).

Other programs were established in Mississippi to provide health and mental care for families, e.g. First Steps Early Intervention for children from birth to age 3 who had developmental delays and the Mississippi Department of Mental Health’s Early Intervention Program, which provided specialized mental health services to children and families in need. The Early Periodic Screening, Diagnosis and Treatment Program
provided health screenings for Medicaid-eligible children birth to five years of age in 105 schools. The Disabled Child Living at Home Program provided at-home services for children with physical handicaps or severe emotional disturbance who would not otherwise have qualified for Medicaid. The Vaccine for Children Program immunized children with Medicaid, those under insured, and those without health insurance. Perinatal High Risk Management/Infant Services System Program provided services for Medicaid-eligible pregnant women and infants. The Mississippi Department of Rehabilitation Services provided health-related services to any pre-school child who was ineligible for services under any other state program. Finally, the Mississippi Division of Medicaid provided three health insurance options for uninsured children in the state: the Children’s Health Insurance Program (CHIP I and Chip II), and Medicaid (Antoon et al., pp. 4-5).

Other parent and family support programs in Mississippi included the Right from Birth: A Parenting Series. This was an educational video series designed to educate parents on developmental stages of early childhood birth to 18 months of age (Antoon et al., p. 6). By 2002, 2,500 parents and childcare providers in Mississippi had received training through this service (p. 70). At least 14 Mississippi school districts offered a family literacy service called Even Start which served 624 children from birth to 7 years of age (p. 34). The Family Preservation Program served families with children who were at-risk of being removed form their homes due to neglect or abuse. The Department of Human Services community-based Families First Resource Centers provided parenting classes, resource libraries, and referral services. The Responsible Father Initiative encouraged fathers to be responsible and involved parents. Also, Bright Futures, a
collaborative effort of the Mississippi Department of Human Services and the Mississippi State University Extension Services, fostered "partnerships between families, health professionals, and communities" and had served 538 families with children birth to age twenty-one" in 2002 (Antoon et al., pp. 6-7 & 52). Blending with services such as these and working directly in conjunction with early education programs for young children, many PAT programs were able to provide links to a well-rounded support structure that many low-income families were in need of to access services and to realize full potential of PAT program services.

Collaborative efforts for the success of the PAT program involve the establishment and regular input of a local community council. This committee helps the PAT program to be a highly visible and integral part of the district or agency within which it operates (Hoelker & McGilly, 1999, p. 24). Members of the council may include representatives from school districts, parent groups, the medical community, social service agencies, religious-based organizations, preschools, local businesses, civic organizations, legislators, and media. The main function of the community council is to be generally supportive and to sustain local commitment by assisting with awareness campaigns and recruitment or referrals.

Each PAT program site is required to have a certified Parents as Teachers Supervisor on site overseeing the program. Supervision of the program, particularly supervision of the parent educators, is much like the clinical supervision model in that it relies on the teacher’s (in the case of PAT, the parent educator’s) active participation in the supervision process for the purpose of teacher and program improvements (Acheson & Gall, 1997, p. 10). Supervising and evaluating the PAT program and parent educators
differed somewhat from traditional classroom teacher supervision and evaluation. However, the basic tenants of clinical supervision apply specifically in regards to "speaking, listening, influencing, observing....Because clinical supervision is built around these processes, it has a certain universality" (pp. 17-18).

Ongoing evaluation is essential to determine the effectiveness of the local program. Evaluation of the PAT program consists of both process and outcome evaluations as well as staff evaluations that are conducted on a continuous, reflective basis. Process evaluations are conducted through observations of ongoing community needs, by soliciting feedback from families and analyzing needs assessment through surveys, screenings, and reports of abuse or neglect, by summarizing the number of families served and by maintaining data files, reports, and other pertinent documentation on demographics, program retention rates and drop out rates. Outcome evaluations reflect child development outcomes, children's scores on kindergarten readiness tests, and parent knowledge assessments (Hoelker & McGilly, 1999, pp. 67-68). Evaluation of the PAT staff include reflective self-evaluations, peer observations, performance based evaluations, and parent surveys used for evaluation of the program and educators.

Program budgets are based upon the full- or part-time status of the parent educator, the number of families served, planning time, professional development, and clerical duties. An estimated budget published by PATNC with the assumptions the program was a year-round program with thirty families served by one part-time parent educator with a salary of $15.00 per hour, estimated the total number of hours for the year was 1,073 bringing the total annual expense for salary to $16,095.00. When figuring in travel, training fees, home visit materials and supplies, and office expenses, the total
estimated cost per family, per year was $627 bringing the total expense of operating a Parents as Teachers program with one Parent educator to $18,810.00 (PATNC, 1999, Estimated Budget: Parents as Teacher Program).

Traditional funding sources for implementing local PAT programs have included school district Title I funds, federal and state grants (such as the Reading Excellence Act or the Reading Sufficiency Act), private foundations like the Phil Hardin Foundation or a combination of sources (Hoelker & McGilly, 1999, p. 15). In 2002, 6 of the 62 PAT programs operating in the state of Mississippi were funded through Senate Bill 2609, Parents as Teachers Pilot Program (lines 59-63) which left 56 PAT programs dependent upon federal, state, and other grant funding sources.

In his article “Family Literacy Education—Panacea or False Promise,” Hendrix (1999-2000) described one of the shortcomings of today’s family literacy efforts was the inconsistency of funding sources for programs initiated in today’s schools. Dependence upon grants for primary funding sources often led to “radical instability of the funding base for family literacy education [and] is a strike against this model as a viable future for the field of literacy.” Furthermore, literacy education was often subject to cutbacks and educational agencies view programs of this nature not as significant to state or district interests as were the other disciplines. Additionally, “these are often seen as adjunct or extra programs” (The Instability of Family Literacy Funding section, para. 1). The instability of funding sources for Mississippi’s PAT programs limited access to PAT and its available benefits for many Mississippi families. However, the No Child Left Behind Act of 2001 funding allocations that continue to develop early literacy programs created a promising funding source for PAT programs across the state. With the six-year funding
provision of the Act, families could have received uninterrupted literacy support services (NCLB, 2002c, Executive Summary). Additionally, with funding stability, future studies of the long-term effects for outcomes such as children's achievement and parental involvement in programs such as PAT would be possible to determine the effectiveness of early literacy efforts in Mississippi.

Sample for the Study

The sample for the present study consisted of 40 parents who had participated in PAT and a comparison group of 40 parents who had not participated in PAT. Both groups had children enrolled in public or private pre-kindergarten and kindergarten school for 2002-2003 school term. Therefore, 80 families participated in this study. The sample for this study was comprised of families from four school districts in Mississippi that have PAT programs. Permission was granted from three Head Start regional directors to survey parents. At these Head Start centers, surveys were sent for the parents who had not participated in PAT to complete. Following are descriptions of the school districts where the PAT programs and the Head Start centers from which the sample was drawn were as follows:

1. One PAT program in the south central part of Mississippi in a rural school district of approximately 1,200 students participated in this study (NCES, Common Core of Data: Public School Districts, 2002). The PAT program began its operation in 1999. Among the parents participating in PAT, there were 11 parents who had participated for at least 10 months with at least 6 months of services provided in those 10 months and had children enrolled in formal school. Ten of these parents completed and returned the survey.
2. The second PAT program in the south central part of the state and was sited in a school district with approximately 3,100 students (NCES, Common Core of Data: Public School Districts, 2002). The PAT program began its operation in 1999. There were 10 parents enrolled in PAT that met the criteria for this study. All 10 surveys were completed and returned.

3. The third PAT program was located in the east central part of the state in a large school district with 6,800 students (NCES, Common Core of Data: Public School Districts, 2002). The program began its operation in 1999. There were 15 parents who met the criteria for this study. Thirteen surveys were completed and returned.

4. The fourth PAT program from which the present sample was drawn is located in the west central part of the state. This is a rural school district with approximately 2,400 students participated in this study (NCES, Common Core of Data: Public School District., 2002). The PAT services were first offered in 1998. Ten parents met the inclusion criteria for this study. Eight surveys were completed and returned.

5. Three Head Start centers were sent surveys and asked them to distribute them among parents who had not participated in the PAT program. One center was in the west central part of the state and two were in the south central part of the state. Surveys to be completed by the intervention group were printed on blue paper and the surveys to be completed by the control group were printed on yellow paper. A total of 46 surveys were sent to PAT supervisors with a letter of instruction for dispersing the surveys to parents who had participated in PAT. Forty-one of these surveys were
completed and returned. One survey was eliminated due to respondent error leaving 40 surveys that would represent the parents assigned to the intervention group.

The three Head Start centers were sent yellow surveys for parents who had not participated in PAT with a letter of instruction for dispersing the surveys to these parents. Two hundred and twenty-five surveys were sent to the three Head Start centers and seventy-six completed surveys were returned. Forty surveys from the control groups were randomly selected from the returned surveys. The surveys were placed in one stack and every third survey was drawn from the stack until a total of 40 surveys had been selected. These surveys represented the parents assigned to the control group.

Design of the Study

This study was designed to explore whether relationships exist in the frequency of parent involvement activities at the child's school, the level of engagement in learning activities at home if a parent had or had not participated in the PAT program, and the relationships of selected demographic variables on parent involvement. Data was collected using the parent survey. This was a quasi-experimental design that included an intervention group of 40 parents who had participated in the PAT program, and 40 families in a control group that had not participated in the PAT program.

The Instrument Design

After the selection of items that were concerned with parent involvement measures from various instruments used by Pfannenstiel and associates in studies of Missouri's PAT programs, a parent questionnaire had been created and was used to collect data (Pfannenstiel & Barr, 1999; Pfannenstiel et al., 1991, 1996; Pfannenstiel & Seltzer, 1985). Items that addressed the parents' involvement in school activities or
learning activities in the home from these questionnaires were combined into a single instrument for this study.

The Parent or Caregiver Survey consisted of four sections labeled A through D. Each section consisted of items selected from various instruments used by Pfannenstiel and associates in studies of Missouri’s PAT programs (Pfannenstiel & Barr, 1999; Pfannenstiel et al., 1991, 1996; Pfannenstiel & Seltzer, 1985). Section A had 14 statements that asked parents to indicate the number of times they had been engaged in specific school involvement activities or behaviors. Each statement in Section A asked the parent to give an approximate number of times in which they had participated in an “in school” activity. The results would allow for interval level measures. Section B had 12 statements to measure the parents’ level of engagement in learning activities with their child at home. The response selections were arranged on a Likert-type scale. Section B of the survey assessed the level of a parent’s engagement in learning activities. However, Section B asked specifically about activities that occurred in the home. Responses for items 15-26 in Section B that were designed on a Likert-type scale are 1) Almost Never, 2) A Few Times a Month, 3) Several Times a Week, or 4) Daily or Several Times a Day. Evaluation of the responses from this instrument was designed to reveal the impact of participation or non-participation in PAT on the level of parent involvement in learning activities in the home.

The last two sections, C and D, consisted of developmental and demographic items. Section C asked parents to respond to their child’s early development experiences. Section D consisted of five demographic items. The survey concluded with demographic information of family characteristics that served as descriptive data to compare the
control group members with the intervention group, in addition to analyzing important data of the relationship that family characteristics have on parent involvement.

Reliability and Validity

Reliability was assessed with coefficient alphas on each subscale of the instrument. Three experts: a leading researcher of PAT with the Research and Training Associates of Overland Park, Kansas; Mississippi’s State Coordinator for Parents as Teachers; and a Certified Parents as Teachers Supervisor/Educator analyzed the Parent or Caregiver Survey for its content validity to ascertain the instrument’s content represented school involvement and home learning activities that the instrument was designed to measure. Since construct validity involves variables that cannot be observed and the specific activities that constitute parent involvement can be subject to opinion, the panel of experts was asked to evaluate the instrument for its content validity rather than for its construct validity. The concern for content validation is with the type of behavior involved in each test item and each expert was asked to evaluate the instrument for the way in which the items in each section of the instrument related to the school involvement and home learning activities. The experts provided feedback on the survey and the instrument was revised based upon this feedback.

Analysis of Data

Characteristics of the Sample

The number of surveys sent, completed, and returned may be found in Table 1. Note that 89% of the surveys sent to parents who participated in PAT were completed and returned, whereas 34% of the surveys sent to parents who did not participate in PAT were completed and returned.
Table 1

*Distribution of Parent or Caregiver Surveys Sent and Returned*

<table>
<thead>
<tr>
<th>Source</th>
<th>N sent</th>
<th>N returned</th>
<th>% returned</th>
<th>N used in survey</th>
<th>% in survey</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PAT location</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>11</td>
<td>10</td>
<td>90</td>
<td>10</td>
<td>25</td>
</tr>
<tr>
<td>2</td>
<td>15</td>
<td>13</td>
<td>87</td>
<td>13</td>
<td>32.5</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>8</td>
<td>80</td>
<td>8</td>
<td>20</td>
</tr>
<tr>
<td>4*</td>
<td>10</td>
<td>10</td>
<td>100</td>
<td>9</td>
<td>22.5</td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>41</td>
<td>89</td>
<td>40</td>
<td>100</td>
</tr>
<tr>
<td><strong>NoPAT location</strong></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>80</td>
<td>35</td>
<td>44</td>
<td>20</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>120</td>
<td>31</td>
<td>26</td>
<td>16</td>
<td>40</td>
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<tr>
<td>4</td>
<td>25</td>
<td>10</td>
<td>40</td>
<td>2</td>
<td>5</td>
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<tr>
<td>Total</td>
<td>225</td>
<td>76</td>
<td>34</td>
<td>38</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>40</td>
<td>100</td>
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</tbody>
</table>

**PAT /NoPAT Totals by location**

<table>
<thead>
<tr>
<th><strong>PAT</strong></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
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<td>0</td>
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<td>2.5</td>
</tr>
<tr>
<td>1</td>
<td>30</td>
<td>37.5</td>
</tr>
<tr>
<td>2</td>
<td>13</td>
<td>16.3</td>
</tr>
<tr>
<td>3</td>
<td>24</td>
<td>30</td>
</tr>
<tr>
<td>4</td>
<td>11</td>
<td>13.8</td>
</tr>
</tbody>
</table>
Table 1 (continued)

<table>
<thead>
<tr>
<th>Source</th>
<th>N sent</th>
<th>N returned</th>
<th>% returned</th>
<th>N used in survey</th>
<th>% in survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>80</td>
<td>100</td>
<td></td>
<td>80</td>
<td>100</td>
</tr>
</tbody>
</table>

* one survey eliminated from study due to respondent error

Table 2 contains information relevant to the distribution of the sample. Highlights of the data show that for the eighty respondents of this study, 76% of the children were in pre-kindergarten program while only 5% were in kindergarten. Male children comprised 42.5% of the respondents' children while females comprised 51.3% of the children. Nearly 89% of the respondents in the study were mothers of the children in either a pre-kindergarten or kindergarten program. There were no fathers, other caregivers, or foster parents indicated as respondents in this study.

Table 2

*Distribution of Child's Grade, Gender, and Respondents' Relationship to Child*

<table>
<thead>
<tr>
<th>Descriptor</th>
<th>N</th>
<th>Table %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-kindergarten</td>
<td>76</td>
<td>95</td>
</tr>
<tr>
<td>Kindergarten</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Male</td>
<td>34</td>
<td>42.5</td>
</tr>
<tr>
<td>Female</td>
<td>41</td>
<td>51.3</td>
</tr>
<tr>
<td>No Response for Gender</td>
<td>5</td>
<td>6.3</td>
</tr>
<tr>
<td>Mother</td>
<td>71</td>
<td>88.8</td>
</tr>
</tbody>
</table>
Table 2 (continued)

<table>
<thead>
<tr>
<th>Descriptor</th>
<th>N</th>
<th>Table %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guardian</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>No Response to Relationship</td>
<td>5</td>
<td>6.3</td>
</tr>
</tbody>
</table>

Reliability Analysis

A reliability analysis was first computed on the Parent or Caregiver Survey as a whole for a coefficient alpha. Of the 51 items on the instrument, 5 items, i.e., the child’s grade, the respondent’s relation to the child, item 26 asking respondents about structuring the child’s time at home, Section C Early Experience of Even Start, and ethnicity, were excluded from the analysis. The coefficient alpha for the 46 items was .72, suggesting that the scale has reasonable internal reliability. The coefficient alpha for the fourteen items in Section A was .79, indicating reasonable internal reliability.

A third reliability analysis was computed on Section B, items 15-26 of the instrument. These 12 items measured the level of a parent’s engagement in learning activities at home. The coefficient alpha for the 12 items in Section B was .93, suggesting reasonable internal reliability. Finally, a fourth reliability analysis was computed for Sections C and D that consisted of 18 items that asked about early childhood experiences and family demographics. The coefficient alpha for the 18 items of .61, indicating a moderate internal reliability of these items.

Data on Family Characteristics and Selected Early Childhood Experience Variables of the Study
Distributions of the family characteristic variables are described in Table 3. Note that of the 80 families surveyed, 62.5% of the children lived with one parent in the home, while 33.8% lived with two parents in the home.

Table 3

**Distribution of Family Characteristics by Number and Percent**

<table>
<thead>
<tr>
<th>Source</th>
<th>N</th>
<th>Table %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Parents in the Home</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No response</td>
<td>2</td>
<td>2.5</td>
</tr>
<tr>
<td>One parent</td>
<td>50</td>
<td>62.5</td>
</tr>
<tr>
<td>Two parent</td>
<td>27</td>
<td>33.8</td>
</tr>
<tr>
<td>Teen parent living in home</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No response</td>
<td>2</td>
<td>2.5</td>
</tr>
<tr>
<td>Black, Not of Hispanic Origin</td>
<td>77</td>
<td>96.3</td>
</tr>
<tr>
<td>White/Caucasian</td>
<td>1</td>
<td>1.3</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>American Indian</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Alaskan Native</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Asian or Pacific Islander</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Mother's Education Level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No response</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Did not complete high school</td>
<td>14</td>
<td>17.5</td>
</tr>
<tr>
<td>High school graduate/GED</td>
<td>38</td>
<td>47.5</td>
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</table>
Table 3 (continued)

<table>
<thead>
<tr>
<th>Source</th>
<th>N</th>
<th>Table %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some college</td>
<td>15</td>
<td>18.8</td>
</tr>
<tr>
<td>Bachelor's Degree</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>MA/MS Degree or higher</td>
<td>1</td>
<td>1.3</td>
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</table>

**Father's Education Level**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
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<tbody>
<tr>
<td>No response</td>
<td>16</td>
<td>20</td>
</tr>
<tr>
<td>Did not complete high school</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>High school graduate/GED</td>
<td>41</td>
<td>51.3</td>
</tr>
<tr>
<td>Some college</td>
<td>7</td>
<td>8.8</td>
</tr>
<tr>
<td>Bachelor's Degree</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>MA/MS Degree or higher</td>
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<td>0</td>
</tr>
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</table>

**Families Receiving Public Assistance**

<p>| | | |</p>
<table>
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</thead>
<tbody>
<tr>
<td>No response</td>
<td>10</td>
<td>12.5</td>
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<tr>
<td>Yes</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>No</td>
<td>30</td>
<td>37.5</td>
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</table>

**Families Who Qualify for Free Meals**

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<th></th>
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</thead>
<tbody>
<tr>
<td>No response</td>
<td>7</td>
<td>8.8</td>
</tr>
<tr>
<td>Yes</td>
<td>62</td>
<td>77.5</td>
</tr>
<tr>
<td>No</td>
<td>11</td>
<td>13.8</td>
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</tbody>
</table>

**Mother Employed**

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</thead>
<tbody>
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<td>No response</td>
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Table 3 (continued)

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<th>Source</th>
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<td>56.3</td>
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<td>No</td>
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<tr>
<td>Father Employed</td>
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<td>61.3</td>
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<td>40-64</td>
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<td>11.4</td>
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<tr>
<td>Number of People living in the home</td>
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<td></td>
</tr>
<tr>
<td>No response</td>
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<td>5</td>
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<tr>
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<td>13.8</td>
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<td>4</td>
<td>23</td>
<td>28.8</td>
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**Head Start**

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<td>No</td>
<td>9</td>
<td>11.3</td>
</tr>
<tr>
<td>About 1 year</td>
<td>26</td>
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<td>53.8</td>
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<tr>
<td>About 3 Years</td>
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**PAT**

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<td>40</td>
<td>50</td>
</tr>
<tr>
<td>About 1 year</td>
<td>15</td>
<td>18.8</td>
</tr>
<tr>
<td>About 2 years</td>
<td>20</td>
<td>25</td>
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<tr>
<td>About 3 years</td>
<td>5</td>
<td>6.3</td>
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Data Representing Parent Involvement

Each research question is restated followed by the relevant statistical findings.

Results used in this data analysis procedure are presented in tabular form.

Research Question #1: Were there differences in the frequency of school participation between parents who have and have not participated in the PAT program?

Chi-square tests were used to test the differences in the frequency of school participation between parents who participated in PAT and those who did not participate.
in PAT. The independent variables were whether the parents who had or had not participated in PAT. The dependent variables were the 14 items from Section A that measured school involvement.

The 14 items on the Parent or Caregiver Survey asked parents to indicate the number of times they had engaged in the particular activity of which the question was concerned. A column was also included entitled “No Opportunity” for parents to indicate if they had had no opportunity to engage in the activity. Many of the respondents who indicated they had not engaged in the activity also chose the “No Opportunity” option. This response was interpreted as meaning that the parent had indicated they had engaged in the activity zero times or had indicated they had had no opportunity to engage in the activity. Either way the frequency of this activity was coded as a zero frequency.

A separate chi-square test was conducted on each of the 14 items (see Table 4). A Bonferroni correction was used to control for a Type I error at .05 across all the test analysis (.05/14 = .004).

These analyses revealed significant differences between the two groups for 13 of the 14 items in subscale A, the subscale related to parental engagement in school activities. However, thirteen items had expected cell frequencies of less than five, and the relevant results must be interpreted with caution.

Table 4

<table>
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<tr>
<th>Item</th>
<th>N</th>
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<th>Min.</th>
<th>Max.</th>
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<td></td>
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<tr>
<td>1. Requested a conference</td>
<td>75</td>
<td>11</td>
<td>54.41*</td>
<td>1</td>
<td>30a</td>
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<th>Item</th>
<th>PAT N</th>
<th>df</th>
<th>$X^2$</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Attended a conference</td>
<td>92</td>
<td>45</td>
<td>6</td>
<td>23.19*</td>
<td>1</td>
</tr>
<tr>
<td>3. Talked with teacher on phone</td>
<td>66</td>
<td>34</td>
<td>5</td>
<td>15.81</td>
<td>1</td>
</tr>
<tr>
<td>4. Wrote notes/letters to teacher</td>
<td>66</td>
<td>22</td>
<td>7</td>
<td>70.22*</td>
<td>1</td>
</tr>
<tr>
<td>5. Received and read newsletter</td>
<td>217</td>
<td>107</td>
<td>11</td>
<td>113.78*</td>
<td>1</td>
</tr>
<tr>
<td>6. Observed in classroom</td>
<td>222</td>
<td>66</td>
<td>9</td>
<td>98.81*</td>
<td>1</td>
</tr>
<tr>
<td>7. Worked with children in class</td>
<td>84</td>
<td>3</td>
<td>7</td>
<td>64.47*</td>
<td>1</td>
</tr>
<tr>
<td>8. Worked with children in school</td>
<td>63</td>
<td>8</td>
<td>4</td>
<td>17.66*</td>
<td>1</td>
</tr>
<tr>
<td>9. Offered suggestion about child</td>
<td>80</td>
<td>21</td>
<td>6</td>
<td>40.99*</td>
<td>1</td>
</tr>
<tr>
<td>10. Attended workshop/discussion</td>
<td>67</td>
<td>29</td>
<td>6</td>
<td>45.04*</td>
<td>1</td>
</tr>
<tr>
<td>11. Attended PTA/PTO</td>
<td>103</td>
<td>77</td>
<td>9</td>
<td>64.10*</td>
<td>1</td>
</tr>
<tr>
<td>12. Attended committee/advisory</td>
<td>76</td>
<td>21</td>
<td>8</td>
<td>82.06*</td>
<td>1</td>
</tr>
<tr>
<td>13. Provided supplies</td>
<td>103</td>
<td>42</td>
<td>6</td>
<td>60.78*</td>
<td>1</td>
</tr>
<tr>
<td>14. Helped teacher from home</td>
<td>60</td>
<td>14</td>
<td>4</td>
<td>53.79*</td>
<td>2</td>
</tr>
</tbody>
</table>

*p ≤ .001; a cells with > 20% expected frequencies less than 5

Research Question #2: Were there differences in the levels of engagement in home learning activities between parents who have and have not participated in the PAT program?
To determine if a difference existed between parents who had and had not participated in PAT and their level of engagement in home learning activities, one-way Analysis of Variances (ANOVA) were conducted for each of the items fifteen through twenty-six on the Parent or Caregiver Survey. Recall that these items were designed to measure the parent's engagement in home learning activities. A Bonferroni correction was used to control for a Type I error at .05 across all the test analysis (.05/12 = .004). Responses to six of the items, 15, 17, 18, 19, 24, and 26, indicated significant differences between the two groups. Responses to six of the items, 16, 20, 21, 22, 23, and 25, did not differ between the PAT parents and the non-PAT parents.

Descriptive data is provided for each of the twelve items of the instrument as they appeared on the instrument in tabular form (see Table 5) followed with a brief analysis.

Table 5

*Analysis of Variance for Home Learning Activities*

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>M</th>
<th>F</th>
<th>( \eta^2 )</th>
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<tbody>
<tr>
<td>Between subjects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PAT  NoPAT</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Read to child</td>
<td>1</td>
<td>3.18</td>
<td>2.56</td>
<td>15.36* .17</td>
</tr>
<tr>
<td>16. Listened to child “read”</td>
<td>1</td>
<td>2.63</td>
<td>2.10</td>
<td>5.90 .07</td>
</tr>
<tr>
<td>17. Told stories to child</td>
<td>1</td>
<td>2.93</td>
<td>2.13</td>
<td>15.81* .17</td>
</tr>
<tr>
<td>18. Took child on outings</td>
<td>1</td>
<td>2.40</td>
<td>1.85</td>
<td>12.86* .14</td>
</tr>
<tr>
<td>19. Discussed daily events</td>
<td>1</td>
<td>3.38</td>
<td>2.65</td>
<td>14.02* .15</td>
</tr>
<tr>
<td>20. Encouraged responsibilities</td>
<td>1</td>
<td>3.78</td>
<td>3.35</td>
<td>7.03 .08</td>
</tr>
<tr>
<td>21. Praised the child</td>
<td>1</td>
<td>3.80</td>
<td>3.43</td>
<td>3.77 .05</td>
</tr>
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</table>
Table 5 (continued)

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>M</th>
<th>F</th>
<th>(\eta^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>22. Taught or helped child learn</td>
<td>1</td>
<td>3.68</td>
<td>1.85</td>
<td>.02</td>
</tr>
<tr>
<td>23. Helped with homework</td>
<td>1</td>
<td>2.83</td>
<td>.01</td>
<td>.00</td>
</tr>
<tr>
<td>24. Displayed art/school work</td>
<td>1</td>
<td>3.35</td>
<td>16.92*</td>
<td>.18</td>
</tr>
<tr>
<td>25. Talked/did math awareness</td>
<td>1</td>
<td>2.50</td>
<td>3.67</td>
<td>.05</td>
</tr>
<tr>
<td>26. Provided structure</td>
<td>1</td>
<td>3.73</td>
<td>11.39*</td>
<td>.13</td>
</tr>
</tbody>
</table>

* \(p < .004\)

**Item fifteen:** There was a significant difference between PAT parents and non-PAT parents with respect to the amount of time they reportedly spent reading to their child, \(F(1, 78) = 15.36, p < .001, \eta^2 = .17\).

**Item sixteen:** There was not a significant difference between PAT parents and non-PAT parents with respect to the amount of time they reportedly spent listening to their child “read,” \(F(1, 78) = 5.90, p < .02, \eta^2 = .07\).

**Item seventeen:** There was a significant difference between PAT parents and non-PAT parents with respect to the amount of time they reportedly spent telling stories to their child, \(F(1, 78) = 15.81, p < .001, \eta^2 = .17\).

**Item eighteen:** There was a significant difference between PAT parents and non-PAT parents with respect to the amount of time they reportedly spent taking their child on outings, \(F(1, 78) = 12.86, p = .001, \eta^2 = .14\).
Item nineteen: There was a significant difference between PAT parents and non-PAT parents with respect to the amount of time they reportedly spent discussing daily events with their child, $F(1, 78) = 14.02, p < .001, \eta^2$ of .15.

Item twenty: There was not a significant difference between PAT parents and non-PAT parents with respect to the amount of time they reportedly spent encouraging their child to complete responsibilities, $F(1, 78) = 7.03, p = .01, \eta^2$ of .08.

Item twenty-one: There was not a significant difference between PAT parents and non-PAT parents with respect to the amount of time they reportedly spent praising their child, $F(1, 78) = 3.77, p = .06, \eta^2$ of .05.

Item twenty-two: There was not a significant difference between PAT parents and non-PAT parents with respect to the amount of time they reportedly spent teaching or helping their child, $F(1, 78) = 1.85, p = .18, \eta^2$ of .02.

Item twenty-three: There was not a significant difference between PAT parents and non-PAT parents with respect to the amount of time they reportedly spent helping their child with homework, $F(1, 78) = .01, p = .92, \eta^2$ of .00.

Item twenty-four: There was a significant difference between PAT parents and non-PAT parents with respect to the amount of time they reportedly spent displaying their child’s art or school work, $F(1, 78) = .1692, p < .001, \eta^2$ of .18.

Item twenty-five: There was not a significant difference between PAT parents and non-PAT parents with respect to the amount of time they reportedly spent talking or doing math activities with their child, $F(1, 78) = 3.67, p = .06, \eta^2$ of .05.
Item twenty-six: There was a significant difference between PAT parents and non-PAT parents with respect to the amount of time they reportedly spent structuring their child’s time, $F (1, 78) = 11.39, p = .001, \eta^2$ of .13.

Summary and Conclusion of Study

Responses to the questions on family characteristics indicated that a majority of the respondents’ children lived in homes where there is one parent. Of those who responded to the question concerning ethnicity, one parent indicated they were Caucasian, and the rest of the respondents of this study indicated they were Black, not of Hispanic origin. Half of the parents had completed high school or obtained a GED certificate. Seventy-seven percent of the respondents indicated they received free meals. Over half of the respondents were employed. Only one fourth of the respondents were between the ages of 17 and 23. Most of the respondents indicated there were three or more people living in the home. Approximately half of the respondents indicated that their child had been in Head Start about two years. Half of the PAT parents who responded to this survey had been involved in the PAT program about two years.

The research on the impact of poverty, lack of family support services, and the lack of early literacy intervention programs on school performance has shown that many children enter school lagging behind in their readiness skills placing them at risk for school retention and for increased risks of dropping out of school in their later years (Lewis, 2001; Peck et al., 1987; Shaul, 2002). One goal of many PAT programs in the state was to target low-income, minority families in order to provide early literacy intervention and parent involvement support (NCLB, 2002a; Reading Excellence Act, 1998; The Reading Sufficiency Act, 1999; Parents as Teachers Pilot Program, 1999). The
data gathered from PAT programs who participated in this study inferred these programs were recruiting and serving primarily low income and minority families. It was interesting to note that according to the 2000 U.S Census Bureau Report, 37 percent of households in Mississippi were headed by single females (Census 2000 Supplementary Survey Profile: Population and Housing Profile: Mississippi) and that 88% of the respondents to this study indicated they were mothers of the child while 63% of the respondents to this study indicated the child lived with one parent in the house with 77% of the respondents' children received free meals at their school. It was suggested from this data that PAT programs involved in this study were providing family support services to primarily minority, single parents with low incomes in efforts to offset the negative impact poverty had on children in regards to entering school ready to learn.

Another goal of many PAT programs is to target teen parents. Yet, 77% of the respondents in this study were 24 years of age and above even though the literature indicated the U.S had high rates of teen births and these mothers were more likely to be on public assistance (National Campaign to Prevent Teen Pregnancy, Halfway There, 2001). The number of teen parents from the data indicated teen parents were not consistently participating in the PAT programs who participated in this study. Some of the reasons for the low teen participation in PAT programs cited by PAT supervisors during the recruitment phase of the PAT programs for this study were that teen parents were often targeted for services, but did not remain in the program for very long. Some supervisors stated the teen parents on their enrollment list moved frequently or did not keep appointments for home visits that were scheduled. These problems with teen parents' enrollment often resulted in either the teen parent dropping from the program or
resulted in inconsistencies of services that were provided. One of the criteria for participation in this study was for the parent to have been enrolled in PAT for at least 10 months with services provided at least 6 times in the ten months of enrollment. Because of the inconsistency of services that were provided for teenage parents, many of these parents were disqualified from participating in this study.

The following summary briefly recapitulates each question and the relevant analytic results. These results are discussed in terms of the relevant conclusions and inferences that can be reasonably drawn.

Research Question # 1: Were there differences in the frequency of school participation between parents who have and have not participated in the PAT program?

There was a significant difference on 13 of the fourteen items between the two groups and the frequency in which they engaged in school involvement activities. PAT parents requested and attended more conferences with their child’s teacher, talked on the telephone more often with the teacher, and wrote notes to the teacher more often. PAT parents observed in the classroom, worked directly with children in the classroom and in the school, and offered suggestions to the teacher about their child’s learning style more often than parents who did not participate in PAT. Additionally, the data of this study indicated PAT parents attended workshops, PTO or PTA, and served on advisory groups more often. Finally, PAT parents provided supplies for class parties and activities and helped the teacher from home more often than did parents who were not participants of PAT.

According to the research on parent involvement, the single most important factor in assuring early student success was parental involvement in the child’s education.
(Epstein, 1995; Henderson & Berla, 1994; Lewis, 2001; Hoelker, & McGilly, 1999; & U.S Department of Education, *Strong Families, Strong Schools*, Key Research Findings, 1994). Furthermore, studies have shown that the more involved parents were in their child’s school, the more successful children were according to grades and test scores. Further, parental involvement is related to other positive indicators, i.e., being better adjusted in school, having better school attendance, and graduating at higher rates (Hernderson & Berla, 1994; Pfannenstiel et al, 1991, 1996; McGilly, 2000). The data of this present study suggested that the parents in this study who participated in PAT were more frequently involved in activities at their child’s school. It is plausible, then, to conclude, that the children of PAT parents would be more successful in school. However, further investigations will have to test this possibility more thoroughly.

Research Question #2: Were there differences in the levels of engagement in home learning activities between parents who have and have not participated in the PAT program?

Twelve items with Likert-scale responses measured the level of home learning activities. ANOVA’s indicated significant differences for six of the test items while six were found not to be significantly different. The items that were significant indicated that PAT parents read to their child, told stories to their child, took their child on outings, discussed daily events with their child, displayed their child’s art and school work, and structured their child’s time to provide rest, nutrition, and exercise more often than parents who did not participate in PAT. The items found to have no significant differences between the two groups were encouraging the child to complete
responsibilities, praising the child, teaching or helping the child to learn, helping the child with homework, and talking about or doing math awareness activities with the child.

Efforts to increase parents’ engagement in home learning activities had been found to focus on literacy intervention and parent education relevant to child development. Denti and Guerin (1999) found that children who failed to read adequately by the third grade were at an increased risk for school failure. Additionally, children who enter school with literacy skills and who have good health were at an advantage for school success (Denton & West, 2002). It is interesting to note that there was a significant difference between the two groups of parents involved in the present study in relation to structuring their child’s time to provide rest, nutrition and exercise. Denton and West also observed that children who were read to at least three times a week and were more likely to have better reading scores. Other researchers have argued that early literacy was an important predictor of school-based literacy. These authors have found that the child’s first subject was reading, that the parent is the child’s first teacher, and that PAT parents showed higher levels of involvement with their child’s learning at school and at home (Pfannenstiel & Barr, 1999; Bhola, 1996; Clay, 1993; Gordon, 1977; Henderson & Berla, 1994; Jones, 1988; McGilly, 2000).

It is important to note that most of the items found to be significant were literacy-related items, e.g., reading to their child; telling stories to their child; taking their child on outings to such places as zoos, libraries, museums, etc.; discussing daily events with their child; and displaying artwork, writing and school work. PAT parents engaged in these activities more often than parents who did not participate in PAT. Based on the research in early literacy intervention and the results of this present study, it appears that children
of PAT parents should enter school with stronger readiness skills to perform literacy-based activities.

Recommendations

Overall this study demonstrated that there were differences between parents who had and had not participated in PAT with respect to parent involvement in the child's school and in engagement in home learning activities. The findings offer promising support for PAT programs which increase parent involvement in schools home learning activities. The present findings suggest that Mississippi continue to provide funding sources for the establishment of PAT programs across the state, as well as for maintaining the PAT programs that have been established thus far. Further, school districts in Mississippi should continue to seek stable funding sources that support the development of PAT programs for early literacy.

PAT programs should continue to recruit and maintain enrollments of minority and low income parents and to expand their recruitment to include parents from various ethnic backgrounds found in each community. Additionally, PAT programs should increase their efforts to recruit and maintain enrollments of teenage parents.

Local PAT programs should continue to develop and maintain record keeping procedures of parent enrollment and progress in the PAT programs in order to provide data for future studies of PAT families as the children of these parents progress through school. PAT programs should also examine the results of the tests conducted in this study to develop strategic plans for strengthening such parent involvement activities found to be non-significant, such as assisting parents in helping their children with math awareness activities and with techniques in helping their child with homework.
School districts should examine the data on parent involvement in schools contained in previous studies and in this present study to use as a guide in developing strategic plans for defining what constitutes relevant parent involvement for the local school district and examining parent involvement policies in efforts to increase the frequency and level of meaningful involvement for all parents in the school.

Conclusion

This study of the four PAT programs in Mississippi was limited to the single factor of a parent’s involvement in their child’s education based upon research that children are shown to perform better in school as a result of more involved parents in their educational development. An examination of the research also revealed that for many minority and low income families in Mississippi, there is a need for early family support programs such as PAT in continuing to provide support for early literacy and child development in efforts to help the state’s young children enter school ready to learn.

Since 1999, with the enactment of Senate Bill 2609, Mississippi has made tentative steps to implement the PAT program into the educational and family service sectors of the state. However, family needs on a statewide scale call for continued expansion of early family literacy programs to include all families in Mississippi with children under 5 years of age. This study was an attempt to examine the impact that participation in PAT has had on parent involvement in order for state legislators, educators, and community members to obtain the data needed to drive decisions for designing and implementing this and other early family literacy programs throughout the state’s educational agencies.
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<td>Author(s):</td>
<td>Shelly Allbritton, Thelma Robinson, Jack Klotz</td>
</tr>
<tr>
<td>Corporate Source:</td>
<td>MSERF Annual Meeting Biloxi, MS</td>
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