

Investments in Early Childhood

An essential industry
that is both good for
business and vital to
Montana's economy



REPORT | MAY 2008

*Everyone benefits from Montana's
early care and education industry.
Building partnerships ensures that
there is a high-quality and affordable
early childhood system for all of
Montana's families.*



INSIGHT
CENTER FOR COMMUNITY
ECONOMIC DEVELOPMENT

Governor's Office of
Economic Development

For more information, please visit www.childcare.mt.gov

Background

The Insight Center for Community Economic Development is a national research, consulting and legal organization dedicated to building economic health and opportunity in vulnerable communities.

The Insight Center works in collaboration with foundations, nonprofits, educational institutions and businesses to develop, strengthen and promote programs and public policy that:

- Lead to good jobs—jobs that pay enough to support a family, offer benefits and the opportunity to advance
- Strengthen early care and education systems so that children can thrive and parents can work or go to school
- Enable people and communities to build financial and educational assets

The Insight Center was formerly known as the National Economic Development and Law Center.

This report is the result of a unique collaboration between the Dennis and Phyllis Washington Foundation, the Montana Department of Public Health and Human Services Early Childhood Services Bureau, the Governor's Office of Economic Development, and the Governor's Education Initiative. Together these partners formed a technical committee, who provided expertise around the data for this report. The Technical Committee included:

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TABLE OF CONTENTS

Introduction	1
Economic Profile of the Early Care and Education Industry	3
Early Care and Education, Business and the Current Economy	17
High-Quality Early Care and Education Builds a Ready Workforce	28
Recommendations	35
Appendix A: Indirect and Induced Multiplier Effects of the Early Care and Education Industry	40
Appendix B: Glossary.....	42

Introduction

In Montana, there are 68,400 children between birth and age eight with working parents. That's 66 percent of all of Montana's children. Generations ago, the way children were raised in Montana looked very different than it does today. Historically, mothers or the extended family took care of young children during the workday.¹ Today, while parents remain children's first and most important teachers, the majority of Montana's parents rely on other adults to care for and educate children during part of the day. The result is a rapidly growing industry with businesses in every Montana community, providing a vital service that supports families' responsibility to raise their children. This report describes the economic effects that the early care and education industry has on Montana.

The early care and education industry encompasses a wide range of programs that offer care and education to children between birth and age eight outside traditional public school (K-12) education. Programs include infant/toddler centers, public and private preschools, family child care homes, Head Start, after-school programs, and care provided by family members, friends, or neighbors where formal payments are made.

This report also offers recommendations for how Montana can strengthen the industry to meet the current needs of Montana's residents, and how Montanans can work together to build an early care and education industry that will help to create strong, prosperous communities for Montana's families today and tomorrow.

This report describes the economic impacts of Montana's early care and education industry—the diverse array of programs in Montana that offer care and education to children between birth and age eight outside traditional public school (K-12) education—and provides recommendations to ensure a strong economy for Montanans, for today and tomorrow.

Montana's Early Care and Education Industry

The majority of economic analyses in this report focus on the programs in Montana's early care and education industry that have data that are tracked and updated regularly. The programs included in this report are:

- Licensed child care centers
- Registered family child care homes (for up to 6 children) and group homes (for up to 12 children)
- Public preschool programs and special education public preschool programs
- Programs that are not required to be licensed or registered but choose to list themselves with the Resource and Referral Network
- Head Start and Early Head Start
- After-school programs for school-age children out of school time

¹ B. F. Hinitz and V. C. Lascarides. *A History of Early Childhood Education*, NY: Routledge/Falmer Publishing, 2000.

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- Programs specifically designed for children of migrant workers
 - Programs offered by tribes
 - In-home providers who receive state funds

A complete description for each program is contained in Appendix B, a glossary. This report uses the terms “child care” and “early care and education” interchangeably, because they both refer to programs that educate and nurture children, often while parents are away at work or school. In general, we prefer the term “early care and education” because it reinforces the educational nature of the industry’s services.

Although some other care and education arrangements are widely used and also add much to the economy, it is difficult to ascertain their impact because there is no collected data unless state and federal funds are used to help pay for the care.² Care and education provided by friends, neighbors and members of the extended family, whether provided in kind, as a favor to or out of love for the children and/or their parents, or in a formal financial arrangement, are not measured in Montana.

In addition, there are some types of center-based programs for which comprehensive, accurate information on funding, enrollment and/or staffing is not collected by any state economic or early childhood agency. As a result, these programs—programs operated by religious institutions or private schools and part-day preschools—are not included in the economic analyses of this report.

Finally, providers who care for up to two or fewer children at any one time are not legally required to register their programs, thus it is difficult to ascertain these programs’ economic impacts.

The following programs are not included in the economic analyses in this report:

- In-home care that does not include any state reimbursement
- Part-day preschools
- Programs operated by religious institutions
- Preschools operated by private schools
- Unregistered providers who care for two or fewer children at any one time with only private pay

By excluding these programs, this report’s findings are conservative estimates of the total impact that the early care and education industry has on the Montana economy.

² M. Brown-Lyons, A. Robertson and J. Layzer. *Kith and Kin—Informal Child Care: Highlights From Recent Research*, National Center for Children in Poverty, New York, 2001.

Economic Profile of the Early Care and Education Industry

The early care and education industry includes a range of programs that serve children ages birth through age 8, outside K-12 education. This section describes the direct economic effects that the early care and education industry has on Montana's economy. To assess these economic characteristics, this section quantifies:

- Factors driving demand, including need, quality, affordability, and accessibility
- The current supply and characteristics of the early care and education market
- The size of the industry, as reflected in output or gross receipts
- The total direct employment of the industry
- Current levels of public investment in early care and education

Factors Driving Demand

Demand for the early care and education industry relies on four key factors that affect a parent's decision to use regulated early care and education for their children.³ These four factors are interrelated, thus making it difficult to quantify market demand from an economic standpoint. They are each described briefly below.

Parental Need

Early care and education programs typically serve children ages from birth through age eight, although some programs may also serve children up to age 12. In 2006, 11 percent of Montana's population, 103,000 children, were between birth and age eight, and 16 percent are between birth and age 12--over 150,000 children (see Figure 1).⁴

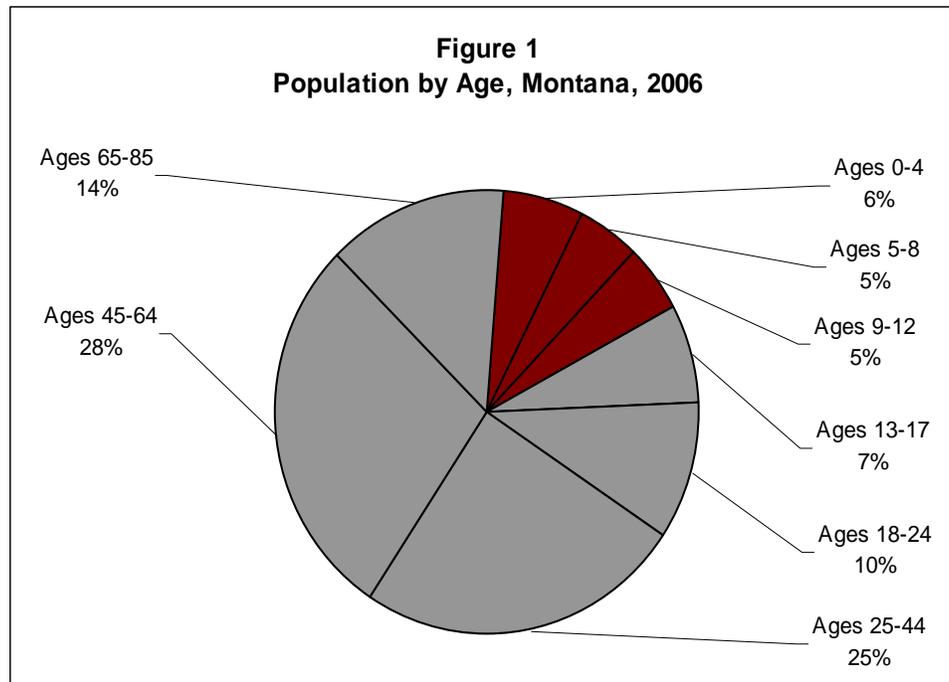
The 103,000 children in Montana between birth and age eight represent 11 percent of the population.

Population projections indicate that the demographic characteristics of Montana's residents will shift dramatically, becoming older. By 2030, through a combination of births and in-migration from other countries and other U.S. states, Montana's overall population is projected to grow to approximately one million residents, an increase of 16 percent since 2000.⁵

³ Smith, E. (2004). *Understanding Child Care Supply and Demand in the Community*, Columbia, MD, The Enterprise Foundation.

⁴ U.S. Census Bureau (2007).

⁵ U.S. Census Bureau (2007).



Source: U.S. Census Bureau, 2007

Over the same period, the population of children in the age range served by early care and education programs is projected to decrease to 149,000 children, a 5 percent decrease since 2000.⁶ This is largely due to out-migration of families with young children and lower birth rates in many parts of Montana. The highest birth rates are found in the tribes, thus many of Montana’s young children are located on or near reservations.⁷ It is important to note that while the population served by early care and education is projected to decline, there is already a considerable gap between need and capacity, and the population decrease will not be sufficient to cover the gap.

The highest birth rates are found in the tribes, thus many of Montana’s young children are located on or near reservations. There is a growing need for care in these areas.

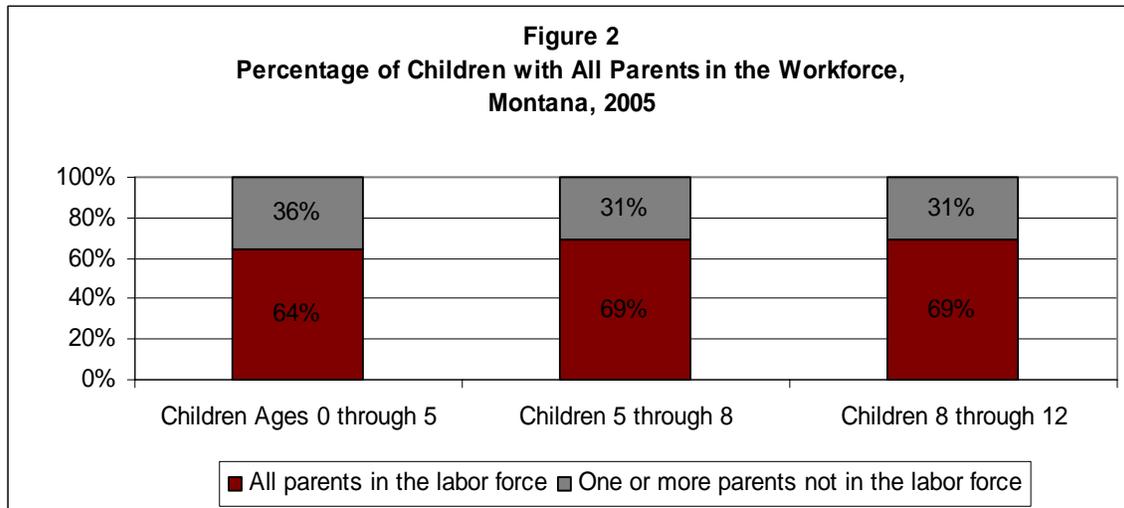
Many children in Montana live in families where all parents work. In particular, an overall average of nearly 67 percent of children (including 64 percent of children ages 0 through 5 and 69 percent of children ages 5 through 18) live in households where all parents participate in the workforce (see Figure 2).⁸ This data accounts for single parents who work, as well as dual parent families where both parents participate in the labor force.

Nearly two-thirds of Montana’s children between birth and 5—37,100 children—and more than two-thirds of Montana’s children ages 5 through 8—31,300 children—live in families in which every parent works, totaling 68,400 children.

⁶ U.S. Census Bureau (2007).

⁷ Montana Department of Commerce (2008). Economic and Demographic Analysis of Montana: Volume II, Demographic Analysis. Retrieved from: www.housing.mt.gov/Hous_CP_Econ_Demographic_Analysis.asp

⁸ Montana Department of Labor & Industry—Research and Analysis Bureau. (2005). *Montana Quarterly Census Employment & Wages (QCEW) 2005 annual average*. Retrieved June 2007 from <http://www.ourfactsyourfuture.org/?PAGEID=67&SUBID=228>



Source: U.S. Census Bureau, 2006

The state's female labor force participation, an indicator of early care and education need and accessibility, is above the national average. Approximately 62 percent of women in Montana participate in the labor force, slightly higher than the national average of 59 percent.⁹ Given the high labor force participation rates of parents in the state, the need for some form of early care and education to enable parents to work and obtain training and education is strong.

Approximately 62 percent of women in Montana participate in the labor force, slightly higher than the national average of 59 percent.

Quality

As more parents understand the importance of quality in early care and education programs, they are more likely to demand it for their own children. The provision of quality early care and education is a function of several interrelated factors including caregiver qualifications and experience, affordability, leadership, business management, parent relations, and the physical plant in which the program is provided. Ultimately though, both the availability and quality of early care and education hinge on two key factors: qualified, nurturing caregivers and a healthy, safe environment with a high staff to child ratio and that is designed to help children at that particular age and developmental stage learn effectively. Simply put, both the people and the place are critical in early care and education.

The availability and quality of early care and education hinge on two key factors: qualified, nurturing caregivers and a healthy, safe environment that is designed to help children at that particular age learn effectively.

Montana was one of the first states in the U.S. to implement a quality rating system, in 2001. While most of Montana's child care facilities are in compliance with state regulations, some offer higher quality programs that encourage social, creative and cognitive development. Montana's Star Quality Rating System identifies two different

⁹ U.S. Census Bureau. (2006).

levels of early care and education quality above registration and licensure. As the Department of Public Health and Human Services states, the quality rating system:

- Improves the quality of care for all Montana children
- Provides parents with identifiable standards of quality
- Encourages child care providers to increase their level of quality
- Rewards quality care with higher compensation from the state¹⁰

Licensed and registered early care and education programs display window decals to indicate their quality rating. Currently, Montana's quality rating system does not provide incentives or standards to unregulated providers to help them increase their quality.

While Montana's quality rating system has never been formally evaluated, six other states have been formally evaluated or are undergoing evaluation. The evaluations found that:

- Quality rating systems are a reliable indicator of quality
- Early care and education quality improves with quality rating systems
- Programs with a defined curriculum have higher quality
- Teachers with college degrees provide higher quality early care and education¹¹

Affordability

Table 1 shows the statewide average annual market rate tuition for the three different types of registered or licensed early care and education programs, by age group. Some families are not able to choose registered and licensed early care and education options because they are too expensive.

Table 1
Average Market Rate Cost per Year for Early Care and Education programs in Montana, by Type of Program and Age of Child

Type of Establishment	Infant	Child
Licensed Child Care Center	\$6,915	\$5,875
Group Child Care	\$6,102	\$5,658
Registered Family Child Care Home	\$5,703	\$5,268

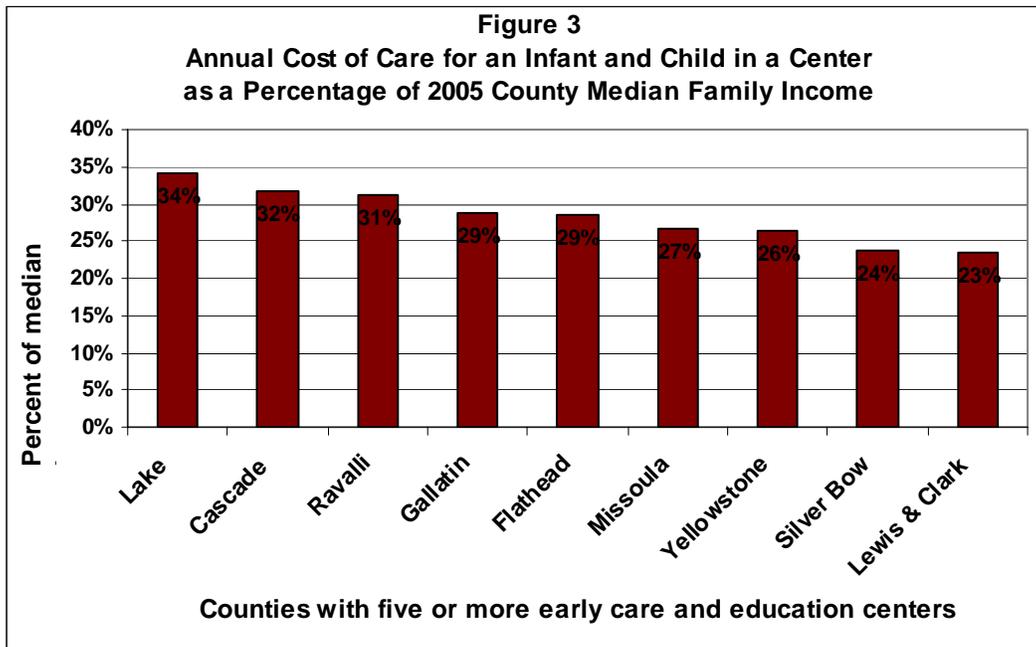
Although the state's unemployment rate was comparatively low, Montana ranked 49th in the nation in annual average wages in 2004, the most recent year for which

¹⁰ Department of Public Health and Human Services Early childhood Services Bureau. "How Does Your Child Care Stack Up?" Available at <http://www.dphhs.mt.gov/mtecfiles/check%20brochure.pdf>. Retrieved April 16, 2008.

¹¹ National Child Care Information Center (2007). Quality Rating Systems and the Impact on Quality in Early Care and Education Settings. <http://www.nccic.org/poptopics/qrs-impactqualitycc.pdf>

comprehensive information is available.¹² Overall, comparing the state median income for 2005, the last year for which this information is available (\$38,503), shows that care for an infant and a child in a licensed child care center would require more than one third of the total family income.¹³

There is geographic variation in this percentage. A comparison of market rates for early care and education programs by county and that county's median family income offers a picture of where in Montana there are greater burdens on families.¹⁴ Figure 3 depicts the counties with the greatest ratio of costs in private-pay, licensed child care centers to county median family income, for those counties with five or more licensed centers. Centers are private businesses, either for- or non-profit, that are licensed by the Montana Department of Public Health and Human Services. The most burdened counties in terms of early care and education costs are Lake, Cascade, and Ravalli.

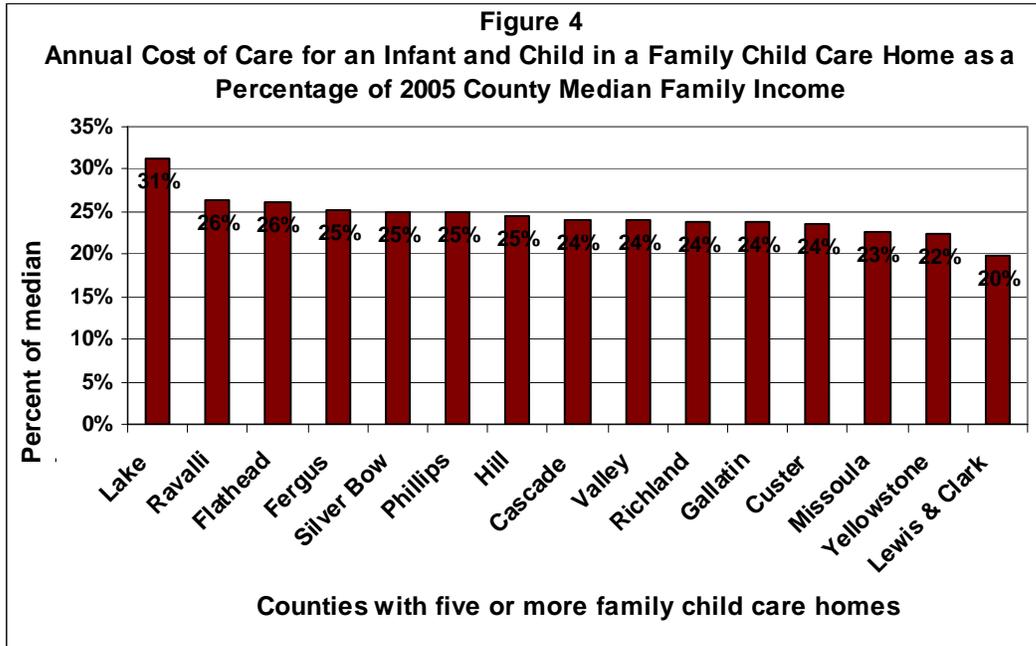


¹² Montana Department of Labor & Industry, Research and Analysis Bureau. (2007). *Annual Average Wage and Rank Since 1977*. Retrieved September 19, 2007 from <http://www.ourfactyourfuture.org/?PAGEID=67&SUBID=230>

¹³ State change in median income from the U.S. Census Bureau's Estimated Median Family Income for a Family of Four, <http://www.census.gov/hhes/www/income/4person.html> was compared to the U.S. Census Bureau's decennial Census median family income information to update 1999 median family incomes to 2005 estimates for each county. Annual costs for early care and education programs from the Montana Department of Public Health and Human Services, Early Childhood Services Bureau.

¹⁴ State change in median income from the U.S. Census Bureau's Estimated Median Family Income for a Family of Four, <http://www.census.gov/hhes/www/income/4person.html> was compared to the U.S. Census Bureau's decennial Census median family income information to update 1999 median family incomes to 2005 estimates for each county. Annual costs for early care and education programs from the Montana Department of Public Health and Human Services, Early Childhood Services Bureau.

Figure 4 depicts costs in registered family child care homes for those counties with five or more registered family child care homes. Family child care homes are independent small businesses that provide care for no more than six children at one time. Group child care homes care for up to 12 children, and require two adult providers. Registration by the Montana Department of Public Health and Human Services requires a criminal background check and child protective services check, proof of immunizations, liability insurance, and orientation. To maintain registration, providers must attend eight hours



of training annually.

Lake, Ravalli, and Flathead require the highest percentages of a median family income for parents who choose early care and education for their children. These percentages do not take into account the large differences in housing prices across different counties. So, while one county may have low early care and education costs relative to neighboring counties, high housing prices may limit the income families have available to pay for early care programs. Families in areas with high housing costs are burdened with two high expenses.

While early care and education is a considerable expense for all families, it is particularly difficult for low-income families. In a study of long-term employment after welfare, researchers found that two factors determined a working mother's ability to sustain employment after leaving welfare: job quality and the availability of early care and education.¹⁵ Women with access to safe and affordable center-based early care and education and with access to quality jobs (positions with higher wages and affordable health insurance) were more likely to be stably employed two years after leaving welfare.¹⁶

¹⁵ Boushey, H. (2004). *Staying Employed After Welfare: Work Supports and Job Quality Vital to Employment Tenure and Wage Growth*. Retrieved August 30, 2006 from http://www.epinet.org/content.cfm/briefingpapers_bp128

¹⁶ Boushey, H. (2004).

Currently, families with a gross income under 150 percent of the federal poverty level (\$2,581 per month or \$30,972 per year for a four-person family) are eligible for some financial assistance, according to Montana state policy.¹⁷ In 2008, that means a family with four members and an adjusted gross income of \$2,582 per month (\$30,973 per year) is not eligible for financial assistance for child care. This may lead some families to use informal care that would prefer to use formal early care and education services.

Two working parents with a three- and a six-year old, earning just above the income eligibility threshold for state child care assistance will have to pay more than a third of their income for center-based care.

The income eligibility threshold for state assistance does not capture all of Montana's families who struggle to pay for early care and education. Some families who earn more than 150 percent of the poverty level are still unable to meet their basic needs. According to a study of the level at which Montana families can purchase housing, health care, transportation, food, child care, and a few other miscellaneous necessities without any assistance, a two-adult family with a preschooler and a school-age child in Bozeman needs more than twice the poverty level for that family size to meet their basic needs.¹⁸ This “gap group”—families above the income threshold but below being able to afford child care—do not have access to quality early care and education.

Accessibility

Location, hours of operation and transitions between part-day programs all affect parents' ability to use formal early care and education. There is limited information on how these factors affect parents' choices in Montana, but as more workers are required to work non-traditional work hours or as commute times rise, it should be recognized that some parents will lose the option of licensed and registered early care and education for their children, because it won't be available when they need it.

The Early Care and Education Market

Supply

Part- and full-time early care and education programs offer approximately 19,893 slots at one time.¹⁹ There are 1,193 licensed or registered early care and education establishments in Montana, including:

There are nearly 1,200 registered and licensed early care and education programs in Montana. Together, they have slots for nearly 20,000 children at any one time.

¹⁷ Montana Department of Public Health and Human Services, Early Childhood Services Bureau. *Montana Child Care Sliding Fee Scale*. Available at http://www.dphhs.mt.gov:8084/MTEC_WEBSITE/pdf/Sliding%20Scale.pdf.

¹⁸ Based on Pearce, D., and Brooks, J. *The Self-Sufficiency Standard for Montana*. Available at <http://www.wowonline.org/ourprograms/fess/state-resources/SSS/The%20Self-Sufficiency%20Standard%20for%20Montana.pdf>. Values were updated from 2002 using the consumer price index and compared to the poverty level.

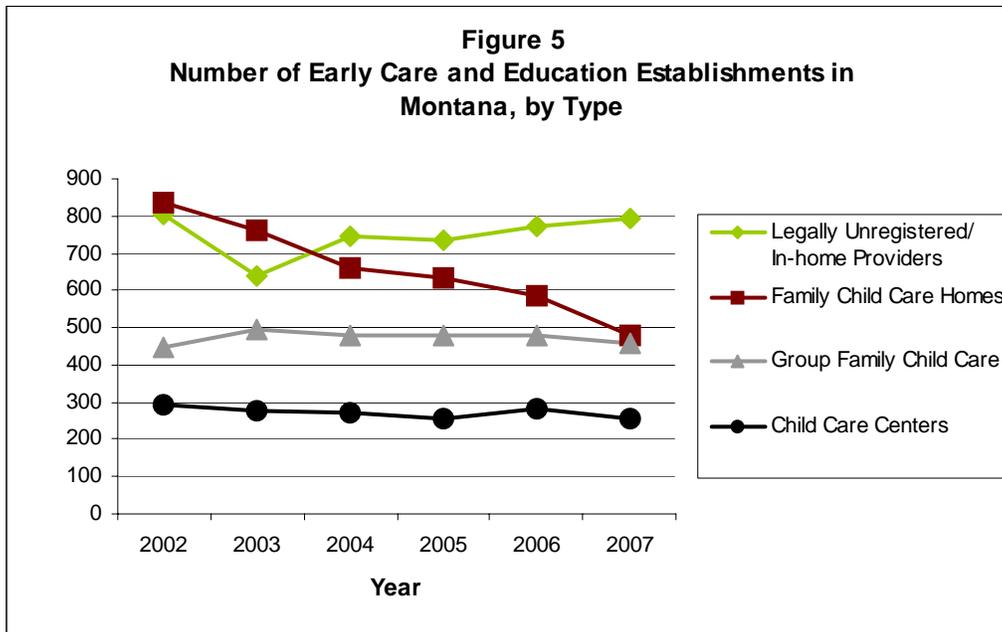
¹⁹ Montana Department of Public Health and Human Services. Early Childhood Services Bureau, 2007. Information is for July, 2007, and was collected by the statewide child care resource and referral agencies, which use NACCRRAware to track licensing information and maintain an up-to-date, comprehensive database of child care use and availability.

- 479 family day care homes
- 456 group day care homes
- 258 early care and education centers²⁰

The current capacity of licensed and regulated early care and education covers less than one-third of the 68,400 children with working parents in Montana.

Additionally, there are over 796 in-home providers receiving state funds to care for 1,625 children.²¹ Compare this to the 68,400 children between birth and age eight who live with a single-working parent or two working parents. Less than one-third of children of working parents can be served at any one time.

The total capacity of the regulated early care and education industry has actually decreased since 2003, although the rate of losing slots appears to have slowed.²² In 2003, there were 20,702 regulated slots for children, indicating a 4 percent drop from 2003 to 2007. Between FY 2002 and FY 2003, however, there was a 12.6 percent drop in the number of regulated slots.²³ Comparing the numbers of various types of establishments, the drop appears to be in number of registered family child care homes and an increase in the number of in-home providers (see Figure 5).²⁴ This means fewer children are being served in registered or licensed programs. The reasons for this shift are not clear, but deserve more study.



²⁰ Montana Department of Public Health and Human Services, Early Childhood Services Bureau, 2007. Licensing and regulation data is tracked using Child Care Under the Big Sky, or CCUBS, software.

²¹ Data provided by Montana Department of Public Health and Human Services, Early Childhood Services Bureau, Child Care Managerial Reports for Fiscal Year 2007, generated 6/22/07, which covers the period through April 2007 (state fiscal year 2007 ends June 30, 2007).

²² Montana Department of Public Health and Human Services, Early Childhood Services Bureau, 2004. The State of Early Care & Education in Montana 2004.

²³ Montana Department of Public Health and Human Services, Early Childhood Services Bureau, 2004. The State of Early Care & Education in Montana 2004.

The number of registered family child care homes has decreased in the past five years, while the number of legally unregistered providers has increased slightly.

There are many factors that increase instability and turnover among family child care businesses, often the newest businesses of child care entrepreneurs, and that may play a role in the trend we see here over the last several years in Montana. First, many family child care providers need more in-depth business skills training to help maintain the stability of their businesses. Second, it is possible that we are seeing a shift in preference away from registered family homes to in-home providers. More study is needed to understand why and where family child care homes are closing.

Measuring Industry Output or Gross Receipts

Output, also known as gross receipts, measures the size of an industry in terms of the overall value of the goods and services produced by that industry over the course of a given year. For the early care and education industry, gross receipts are equal to the total amount of dollars flowing into the sector in the form of payments for care, including both parent fees and private and public subsidies.

State and national surveys do include “child day care services” as an industry classification, but they underestimate the size of the industry because of its diversity of establishments, which includes self-employed individuals, programs run by religious or social organizations, and not-for-profit and for-profit small businesses and chains.²⁵ This study uses a more accurate method of measuring the size of the early care and education industry, primarily relying upon data from Montana’s Early Childhood Services Bureau in the Department of Public Health and Human Services.

For registered family child care homes and licensed child care centers, gross receipts were calculated by multiplying average yearly consumer price by usage. Usage was defined as full-time equivalent enrollment, which was based on direct surveys of providers. To ensure that gross receipts were accurately captured, rates and usage information were broken down by type of establishment (licensed child care centers, registered family child care homes, and group homes).

Annual government expenditure information was used for all Head Start classrooms (Head Start, Early Head Start and tribal Head Start); programs for young children administered by the Office of Public Instruction outside of traditional K-12 education, and legally unregistered in-home and relative care providers who receive payment from the state for their care services.

Based on the methodology briefly described above, the estimated value of annual gross receipts for the formal early care and education industry in Montana is \$143.4 million.

²⁴ Data for years 2002 through 2006 is from Montana Department of Public Health and Human Services, Early Childhood Services Bureau. Montana Child Care Data Report, State Fiscal Year 2006. Data for 2007 is from this report.

²⁵ The North American Industry Classification System (NAICS) is the most used classification system, separating industries into 20 major sectors, and 1,196 industry subsectors. “Child Day Care Services” is NAICS code 624410.

Every year in Montana, the early care and education industry generates \$143.4 million in gross receipts—the total amount of dollars flowing into the sector in the form of payments for care, including both parent fees and private and public subsidies.

The annual \$143.4 million in gross receipts includes many different programs which are itemized below, and explained in greater detail in Appendix B:

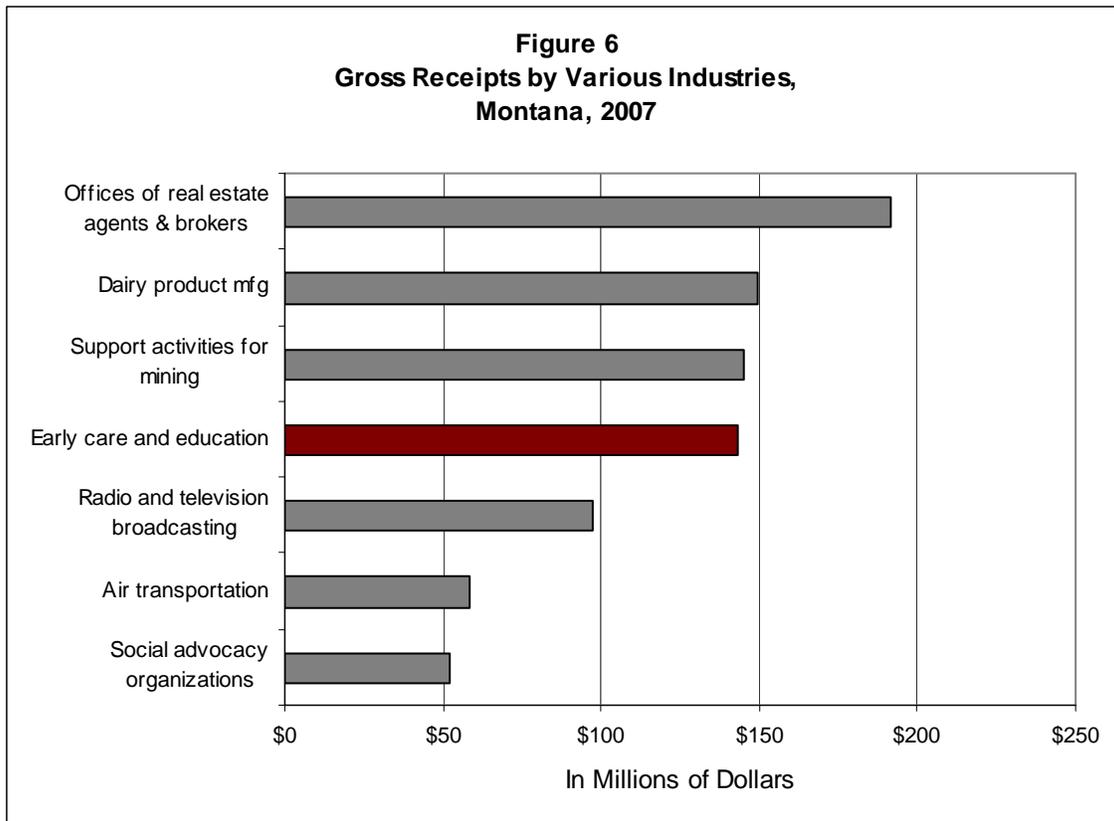
- \$51.5 million for licensed child care centers, including state-funded programs and excluding Head-Start-funded programs
- \$33.6 million for registered family child care homes (family and group)
- \$18.5 million for Head Start programs, not including those that serve tribal children
- \$12.6 million for tribal early care and education programs, including tribal Head Start and Early Head Start
- \$3.3 million for school-age programs that list with a statewide child care database for parents, maintained by child care resource and referral agencies
- \$2.9 million for legally unregistered programs that choose to list formally with Montana's resource and referral network
- \$2.8 million for programs for children with special needs through the Montana Office of Public Instruction
- \$2.5 million for Early Head Start programs
- \$2.1 million for in-home providers who receive reimbursement from the state for their services
- \$2.1 million for after-school programs for preschool through third graders funded by the federal 21st Century Learning Program
- \$366,000 for children under age eight who live with parents who migrate for work

There are also two additional sources of funds for early care and education establishments that help fund programs directly, separately from tuition costs. They are included in the gross receipts calculation because they constitute money that flows into the sector. They are:

- \$9.6 million for nutritious food programs in centers and homes (funded separately from tuitions) from the United States Department of Agriculture
- \$2.4 million in Best Beginnings Quality Initiative, a critical piece of the state system, designed to improve the quality of early care and education programs throughout Montana.

Gross Receipts Compared with Other Industries

The early care and education industry plays a key role in Montana's economy, and to demonstrate its significance, the following section compares early care and education to other key industries in the state (see Figure 6). These are selected to give some context to the gross receipts numbers—they do not represent any particular spectrum or group of industries. The early care and education industry generates considerably more gross receipts than all radio and television broadcasting, air transportation, company management industry, and social advocacy organizations.



Source: U.S. Census Bureau, 2002, updated to 2007 using the Consumer Price Index (CPI).

Direct Employment

Direct employment for early care and education in Montana is estimated to be 6,611 jobs (FTEs) including:²⁶

- 2,362 jobs for licensed child care centers, including state-funded programs and excluding Head Start
- 826 for group child care homes
- 796 for legally unregistered providers who receive voucher payments
- 752 for Head Start programs

²⁶ Full-time equivalent employees include those who work at least 40 hours per week.

-
- 546 for tribal early care and education programs
 - 597 family child care providers
 - 398 for after-school programs for preschool through third graders funded by the federal 21st Century Learning Program
 - 156 for school-age programs that list with Montana's child care resource and referral agencies
 - 93 for Early Head Start programs
 - 42 for legally unregistered programs that choose to list formally with Montana's child care resource and referral agencies

The early care and education industry directly supports more than 6,600 jobs in Montana.

The direct employment estimate for staff working in licensed or registered establishments, tribal programs, and Head Start programs is derived from databases maintained by the Early Childhood Services Bureau and the Montana Office of Public Instruction to ensure the health and safety of children. Direct employment figures for school-age programs and legally unregistered programs is based on typical staffing ratios, and the number of in-home providers who receive voucher payments is available from expenditure data.²⁷

Direct Employment Compared with Other Industries

To put employment findings in context, the number of jobs in early care and education is compared to employment in other industries (see Figure 7). These are only intended as comparisons, and do not represent any particular spectrum of industries, nor do they correspond to the industries that compare to early care and education's gross receipts values. The number of jobs in early care and education is two-thirds the number of employees in all traveler accommodations in Montana, a critical part of the tourism industry, and there are three times more jobs in early care and education than there are in all of Montana's general freight trucking (2,931 employees).²⁸

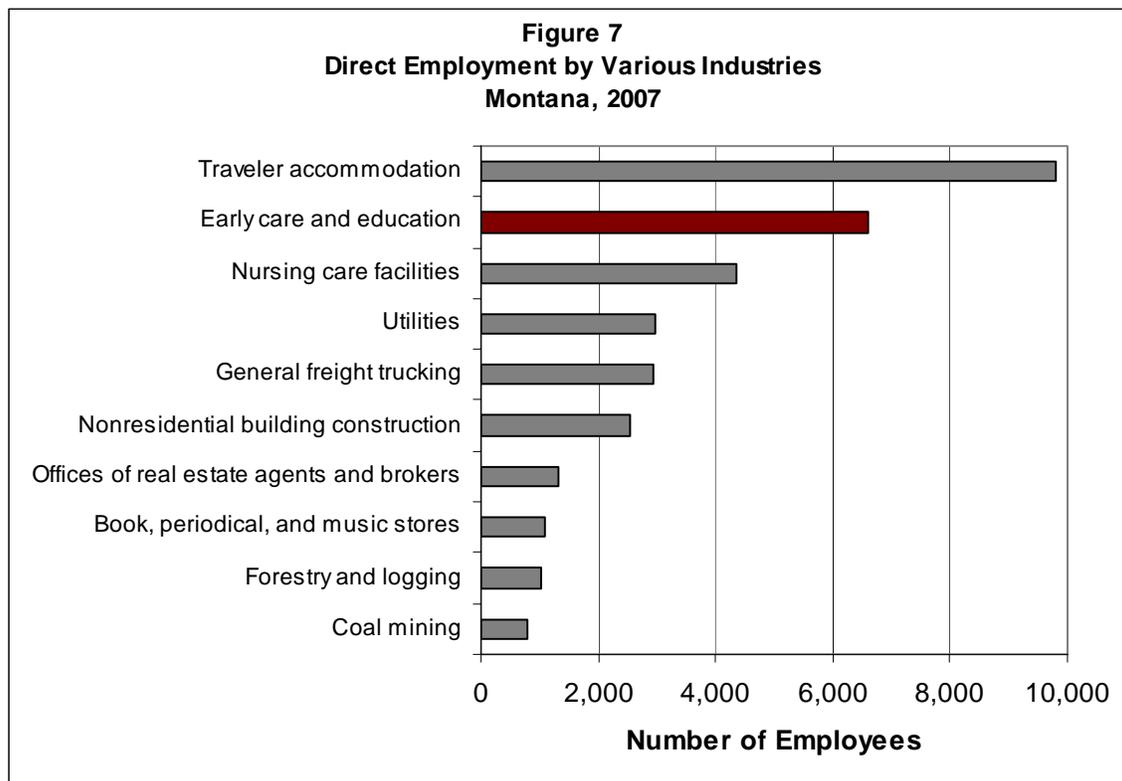
In addition, there are more jobs in early care and education in Montana than there are workers in nursing care facilities (4,353 employees) and in offices of real estate agents and brokers (1,307 employees).²⁹

²⁷ Administrative Rules of Montana, 37.95.623 *Day Care Centers: Child-To-Staff Ratios*

<http://www.dphhs.mt.gov/legalresources/administrativerules/title37/chapter95.pdf>. Retrieved February 4, 2008

²⁸ U.S. Department of Labor, Bureau of Labor Statistics. (2005). *Quarterly Census of Employment and Wages*. Retrieved April 2007 from <http://data.bls.gov>.

²⁹ U.S. Department of Labor, Bureau of Labor Statistics. (2005).



Source: U.S. Department of Labor, Bureau of Labor Statistics, 2007

There have been a number of comprehensive studies of the early care and education workforce, showing low wages and high turnover in the industry.³⁰ This lessens the impact of investments in education and skills training, because qualified teachers may leave for higher paying jobs in other industries. The quality and stability of the workforce will increase with adequate wages and benefits.

Indirect Effects of the Early Care and Education Industry

Every industry, including early care and education, is linked to the rest of the economy in a number of ways, reflecting the fact that establishments purchase supplies from other businesses and the industry's employees spend their earnings in part on locally produced goods and services. The linkages of the early care and education industry in Montana can be measured using an input-output model and its associated multipliers, a methodology used by some economic development specialists. While the multiplier methodology is not without controversy, these estimates illustrate that early care and education is an important, integrated component of the Montana economy, through its direct employment, output, and economic linkages.

³⁰ Montana Child Care Resource and Referral Network (2005). 2005 Montana Home Child Care Workforce Survey. Available at <http://www.montana.edu/wwwecp/pdfs/Home%20CC%20Workforce%20Short%20Rpt%208-06.pdf>. Retrieved April 30, 2008.

These multipliers may be used to assess indirect and induced effects of these economic indicators. Based on a gross receipts output estimate of \$143.4 million in early care and education, an additional \$126.2 million is generated in other industries, resulting in a total economic impact of \$269.6 million.

And, based on a direct employment estimate of 6,611 jobs in early care and education, 3,570 indirect jobs are sustained by licensed early care and education, for a total economic impact of 10,181 jobs. Please see Appendix A for more information.

Public Investments -- Local, State and Federal

Public investments are used to support the early care and education industry in two ways: first, they ensure that parents who earn low wages are still able to work and, second, they are used to bolster the opportunity for parents to choose quality programs for their children.

Based on the gross receipts information detailed above, public investments total \$52 million annually in Montana. These funds support programs that ensure: families with low-income have access to care and education programs, children have nutritious food, children with special needs have appropriate learning plans, and young children in K-12 education have the additional educational programs before- and after-school to facilitate their in-classroom learning.

Public investments are used to support the early care and education industry in two ways: first, they ensure that parents who earn low wages are still able to work and second, they are used to bolster the opportunity for parents to choose quality programs for their children.

The majority of these public investments are from federal dollars and are grounded in parental choice, offering parents who need and would prefer early care and education services for their children the opportunity to use those services. These investments enable Montana's families to work, improve the quality of care and education for Montana's children, and help make Montana an attractive place for businesses and skilled workers. As the next two sections describe in detail, these positive results also offer a positive return on investment that makes early care and education a natural economic development strategy.

Early Care and Education, Business and the Current Economy

This section describes the role that early care and education plays in supporting the current workforce and driving labor force productivity.

By creating opportunities for labor force participation and promoting career development, the early care and education industry plays a vital role in supporting Montana's overall economy. Through its support of the workforce, the early care and education industry contributes to increased profitability among local businesses. This section lays out evidence that the availability of early care and education promotes a healthy bottom line by driving productivity, by decreasing turnover and absenteeism, and increasing the pool of potential new employees. This section presents a variety of cost-effective early care and education strategies for employers.

Early Care and Education Supports the Current Workforce

The early care and education industry plays an important role in supporting Montana's existing labor force. It:

- Sustains labor force participation of parents
- Promotes career development and educational advancement

Before exploring the ways in which the early care and education industry is linked to the current workforce, understanding the characteristics of the state's workforce is key.³¹

Nearly 500,000 Montana residents participate in the labor force.³² Between 2000 and 2006, Montana's labor force grew by 11 percent, adding nearly 50,000 workers.³³ Since 1994, Montana's economy has become increasingly diversified, shifting away from mining and towards construction, retail trade and professional services (see Figure 1).³⁴ Employment in local, state, and federal government accounts for nearly 20 percent of the state's workers (nearly 80,000 workers, including public education teachers and other employees as well as state university employees).³⁵ The health care and social assistance industry (which includes jobs in early care and education) employs over 50,000 of the state's workers.³⁶ Labor force participation for Native Americans has been lower than whites—55 percent compared to 76 percent in June 2007, respectively.³⁷

³¹ Industry employment data is based upon information from the Montana Department of Labor & Industry, Research and Analysis Bureau. For more detailed definitions of each sector, please visit <http://www.ourfactyourfuture.org> or the North American Industry Classification System website (<http://www.census.gov/epcd/www/naics.html>).

³² U.S. Census Bureau. (2007). *2006 American Community Survey*. Retrieved September 2007 from <http://factfinder.census.gov>

³³ U.S. Census Bureau. (2007).

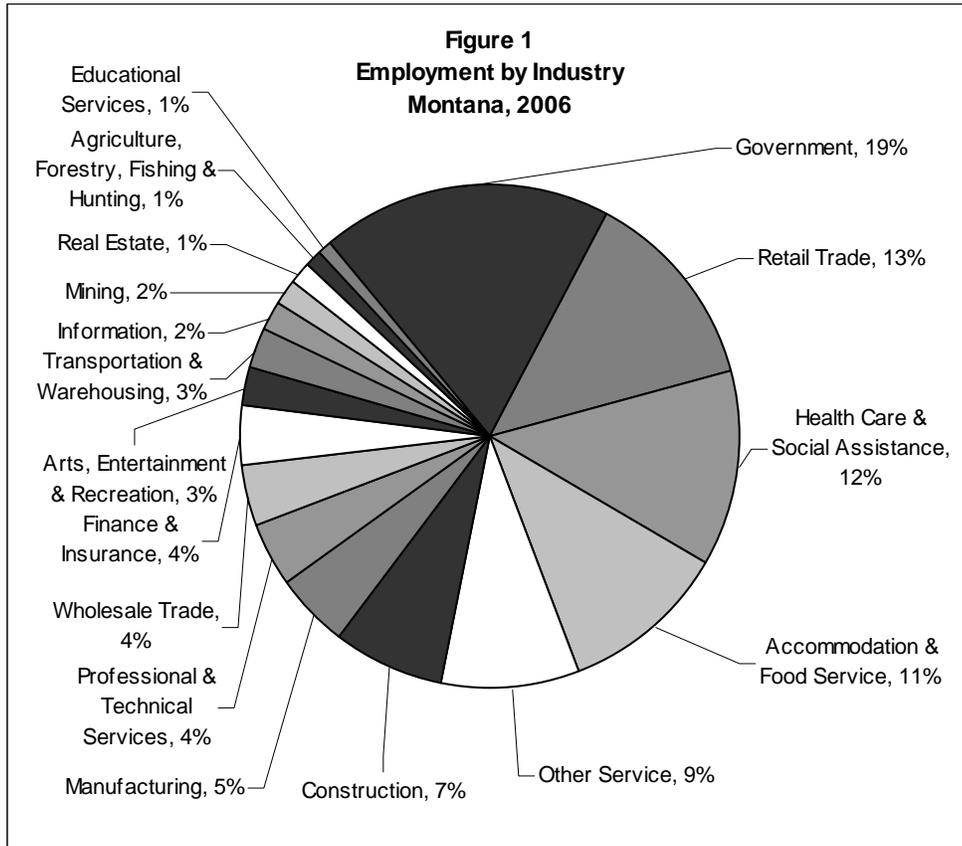
³⁴ Montana Department of Commerce. (2007). *Economic and Demographic Analysis of Montana, Volume I, Economic Profile*. Retrieved September 24, 2007 from http://housing.mt.gov/Includes/CP/Docs&Rpts/CP_E&D-VOL-I.pdf

³⁵ Montana Department of Labor & Industry—Research and Analysis Bureau. (2005). *Montana Quarterly Census Employment & Wages (QCEW) 2005 annual average*. Retrieved June 2007 from <http://www.ourfactyourfuture.org/?PAGEID=67&SUBID=228>

³⁶ Montana Department of Labor & Industry—Research and Analysis Bureau. (2005).

³⁷ U.S. Census. Current Population Survey.

Economic conditions in Montana can be improved for businesses and Native Americans by drawing more Native Americans into the labor force.



Source: Montana Department of Labor and Industry, 2006

Working families make up a noticeable share of the total labor force at any one time. Approximately 11 percent of the labor force (or nearly 55,000 workers) live in households with children under the age of eight and where all parents work.³⁸ In total, these families earn over \$2.2 billion annually in Montana.³⁹

There are 55,000 workers in Montana who are also parents of children between birth and age eight. Together these parents earn over \$2.2 billion every year.

Not all of these families use the early care and education industry, as defined in this report—some may arrange work schedules so that one parent is home with children, or reduce work hours to work part time. Others may place children in informal care arrangements. For example, over 12,600 grandparents in Montana live in the same households as their grandchildren.⁴⁰ Furthermore, technology advances have enabled more people to work from home, expanding early care and education options for

³⁸ This number was developed by NEDLC using data from the 2006 American Community Survey on children, income.

³⁹ This number was developed by NEDLC using data from the 2006 American Community Survey on children, income.

⁴⁰ U.S. Census Bureau. (2006).

families, and approximately 6.7 percent (over 30,000 individuals) of the labor force work from home in Montana.⁴¹ The changing workforce landscape does affect what parents need from the early care and education industry, and affects the business stability of care providers. Each community is different in Montana, and better communication between employers, employees, and the services of the local early care and education providers helps to ensure that everyone's needs are met.

In 2006, the state's average annual unemployment rate (not seasonally adjusted) was 3.2 percent, compared to a national unemployment rate of 4.6 percent.⁴² While the low unemployment indicates a strong economy, it also presents a challenge to Montana. As the Department of Labor and Industry states:

*The shortage of workers is not a short-term issue. If Montana's population continues to increase at its current rate and labor force participation remains stable, the state's workforce will begin to contract in 2013. This, combined with a growing population, would have a negative impact on the state's economy and highlights the need to draw new workers into the labor force.*⁴³

A shortage of affordable and high-quality early care and education arrangements may inhibit labor force participation by parents. The ability to stay home with one's young children is one of personal choice and is often driven by financial dynamics. The relationship between parents working and caring for their children can be a charged topic—this report does not aim to end that social debate. Instead, this report demonstrates that a strong early care and education system offers young parents options for how they choose to balance the responsibilities of raising their children and providing for them. This enables parents to make the personal choices they desire for their families.

A strong early care and education system offers young parents options for how they choose to balance the responsibilities of raising their children and providing for them.

Montana's Department of Labor and Industry has recently added questions to a worker survey to understand the preferences and needs for child care options, which will help to describe the relationship between work and child care in Montana.

Early Care and Education Promotes Career Development and Educational Advancement

A shortage of highly skilled and educated workers in Montana undermines the state's ability to attract new businesses with higher paying jobs and thus, impedes the state's long-term economic prosperity. Approximately 10 percent of adult state residents do not have high school diplomas and about 70 percent do not have college degrees.⁴⁴

⁴¹ U.S. Census Bureau. (2006).

⁴² Montana Department of Labor & Industry, Research and Analysis Bureau. (2007). *Unemployment Rates and Labor Force Statistics*. Retrieved September 19, 2007 from <http://www.ourfactsyourfuture.org/cgi/dataanalysis/AreaSelection.asp?tableName=Labforce>

⁴³ Investing in Montana's Economic Future: Labor Day Report 2007. (2007). Research and Analysis Bureau, Workforce Services Division, Montana Department of Labor & Industry. Retrieved from http://www.ourfactsyourfuture.org/admin/uploadedPublications/2042_2007_MT_Labor_Day_Report.pdf

⁴⁴ U.S. Census Bureau. (2006).

Montana needs skilled labor that is not only derived by attending college but also through participating in apprenticeship programs. A strong early care and education industry serves two critical functions in building a ready workforce. While it provides a critical foundation for future learning (which is described in greater detail in the next section), it also gives working parents the flexibility they need to broaden their skills and encourage their participation in the labor force.

A more educated and trained workforce benefits:

- Parents through higher incomes and lower unemployment
- Taxpayers through decreased need for public services
- Businesses through a more skilled workforce and increased productivity

To help parents increase their skills or educational attainment, some school campuses do offer early care and education programs. Early care and education programs on school campuses encourage excellence in student-parents. Research demonstrates that student-parents who use on-campus early care and education:

- Have higher grade point averages
- Are more likely to remain in school and graduate in fewer years
- Have higher graduation rates than student-parents who do not have access to affordable and high-quality early care and education programs⁴⁵

Similarly, student-parents indicate that the availability of early care and education is critical to their decision to enroll in college.⁴⁶ Limited capacity in early care and education programs offered during non-traditional hours prevents parents from enrolling in classes or programs that are offered outside of the traditional workday.

Funded early care and education programs on school campuses enable working parents to update their skills while their children are in quality educational environments.

Montana is fortunate to have some early care and education programs offered in conjunction with adult learning. The Montana Adult Basic and Literacy Education (ABLE) Programs play a significant role in workforce development and transitions to post secondary education. Five of the Montana's 20 ABLE programs (Butte, Missoula, Great Falls, Livingston, and Havre) have access to early care and education. The other 15 programs do not. In addition, at the University of Montana, the Associated Students of the University of Montana run an early care and education program. This is a great example of students, faculty, and staff using an on-campus program. This facility enables many students to attend school, and allows staff and teachers to have access to quality early care and education.

⁴⁵ The National Coalition for Campus Children's Centers (1999). *Impact of Campus-based Child Care on Academic Success, Student Parents at SUNY Community Colleges, 1989* and *Child Development Center Participant Analyses, Bronx (New York City) Community College, 1994*. As cited by The National Coalition for Campus Children's Centers in their policy brief: *Campus Child Care Bill: Child Care Means Parents in School Act, S1151 and H.R. 3936*.

⁴⁶ National Coalition for Campus Children's Center. (1999). Policy Brief entitled *Campus Child Care Bill: Child Care Access Means Parents in School Act, S1151 and H.R. 3936*.

Early Care and Education Drives Labor Force Productivity

Like other components of a strong economic infrastructure, the early care and education industry supports businesses by increasing employee productivity. The availability of affordable, accessible, quality early care and education has positive effects on businesses' bottom lines.

Nationally and locally, businesses realize that they can increase their profitability by working to ensure that high-quality early care and education options exist for their employees. For individual businesses, early care and education:

- Increases employee retention
- Reduces absenteeism
- Enhances recruitment of the most skilled workers
- Increases on-the-job productivity

Early Care and Education Increases Employee Retention

For most companies, particularly those that rely on highly skilled workers, retaining existing staff is a priority. Employees with young children may consider discontinuing work or moving to a more family-friendly company if they are not able to find suitable early care and education solutions. Employers with regular shifts in work hours for employees or mandatory unscheduled overtime may inhibit the ability of parents to stay in those jobs. Workers in any businesses who feel supported in their new family roles or feel that their workplaces offer a balance between work and home obligations are less likely to have unscheduled absences or leave their jobs.⁴⁷

Parents of young children without safe, affordable options for caring for their children may leave their jobs, costing businesses money for recruitment and retraining and forcing them to lose skilled workers.

When employees do leave because of early care and education problems or transfer to a company with better early care and education options, companies lose human capital and incur high turnover costs. A national study of companies that offer on-site child care to their employees found that turnover was nearly 50 percent lower for those who used centers when compared to other workers.⁴⁸ The survey also found that more than half of the centers' users had been with their company for more than five years, and nearly half had been with their company for more than ten years.⁴⁹ Another national survey found that 19 percent of employees at companies with early care and education programs indicated that they have turned down other job opportunities rather than lose work-site early care and education.⁵⁰

⁴⁷Blue Cross Blue Shield of Massachusetts. (2003). *Blue Cross Blue Shield of Massachusetts Names One of the 100 Best Companies for Working Mothers Nationwide*. Retrieved from <http://bcbsma.com>.

⁴⁸Bright Horizons Family Solutions. (2003). *The Real Savings from Employer-sponsored Child Care: Investment Impact Study Results*. Boston, MA: Bright Horizons.

⁴⁹Bright Horizons Family Solutions. (2003).

⁵⁰Simmons College. (1997). *Benefits of Work-Site Child Care* as cited by Bright Horizons Family Solutions.

One occupation in which recruitment is a recognized national issue is in nursing. According to a study by Bright Horizons Family Solutions, 24 percent of nurses have seriously considered leaving their jobs due to child care issues, and nurses with young children miss an average of nine days per year due to a child's illness, breakdowns in child care arrangements, or mismatches between early care and education and work schedules.⁵¹ Among health care centers that offer on-site early care and education, Bright Horizons Family Solutions found that voluntary turnover among child care center users reduced by nearly 90 percent, offering more than \$1 million in savings in replacement costs alone.⁵²

Having staff leave is more than an inconvenience; it affects the bottom line. A meta-analysis of 15 different turnover cost studies found that the average turnover costs for a full-time employee earning \$8 per hour are over \$9,000, 56 percent of the annual wages for that employee.⁵³ For salaried employees, costs are at least 150 percent of the base salary, and increase for higher-paid and more valued staff.⁵⁴ In a region with low unemployment, such as Montana today, turnover costs will run even higher.

Turnover costs for staff are over \$9,000 for employees earning \$8 per hour, and 150 percent of the salary of salaried employees. In a region with low unemployment like Montana today, turnover costs run even higher.

Early Care and Education Reduces Absenteeism

Another costly aspect of worker productivity is unscheduled absenteeism. Nationally, unscheduled absenteeism in 2005 cost businesses an average of \$660 per employee, costing large employers up to \$1 million per year.⁵⁵ More than one-fifth of all unscheduled absences are due to family issues, which include early care and education breakdowns (see Figure 2).

More than one fifth of all unscheduled absences from work are due to family issues, costing businesses money and productivity.

To ensure the health of all children, regulated or licensed early care and education providers may not care for a sick child. There may be unlicensed options, such as an informal provider, or a sick child care facility like one operated by St. Patrick's Hospital in Missoula staffed by skilled nursing staff, but in most cases, parents need the flexibility to care for their children without losing pay or the opportunity to get their work done. Offering tele-commuting and flexible hours encourages workers to take the time they need at home while still accomplishing their work. Helping workers find or pay for back-up care by giving them paid sick leave, stipends for using an in-home provider or babysitter, or maintaining a list of possible back-up care providers shows commitment to workers' family needs and are also cost-effective. Businesses that address the emergency, back-up early care and education needs of employees find high return on investment and more

Offering options for parents with sick children saves businesses money.

⁵¹ Bright Horizons Family Solutions. (2003a).

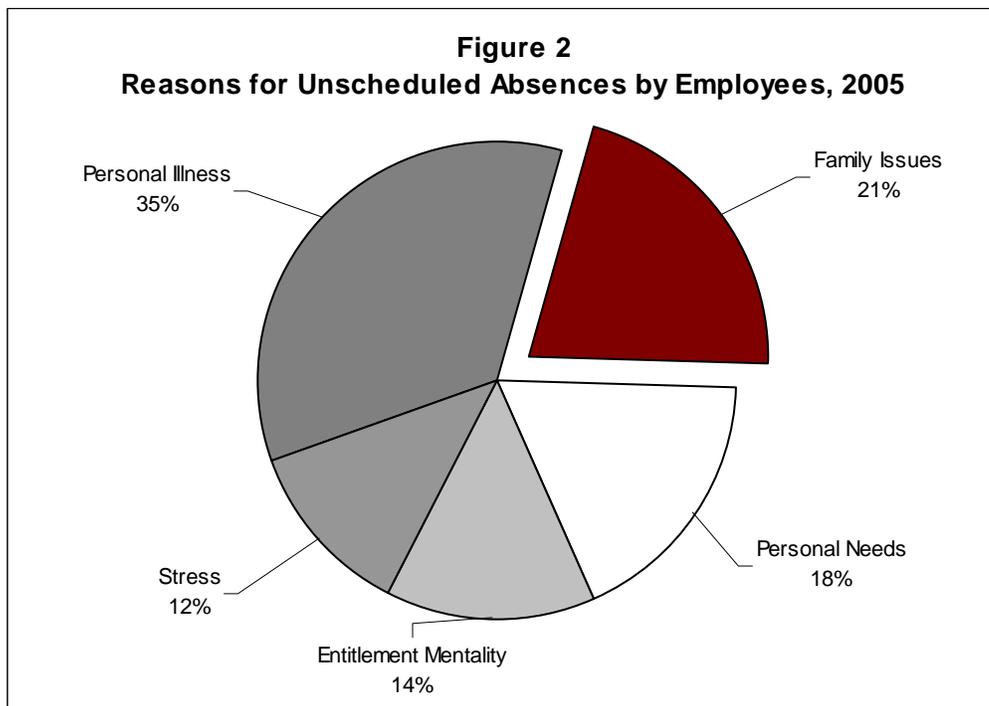
⁵² Bright Horizons Family Solutions. (2003a).

⁵³ Sasha Corporation. (2003). *Turnover Costs in 15 Different Studies*. Retrieved from <http://www.sashacorp.com>.

⁵⁴ Bliss, W. (1999). *The Business Cost and Impact of Employee Turnover*. Retrieved from <http://blissassociates.com>.

⁵⁵ CCH Incorporated. (2005). *2005 CCH Unscheduled Absence Survey*. Retrieved July 2006 from <http://www.cch.com/press/news/2005/200510121h.asp>

loyal workers.⁵⁶ Nationwide, approximately 16 percent of major employers offer sick or emergency back-up early care and education to reduce employee absenteeism.⁵⁷ These programs have a significant return on investment.



Source: CCH Incorporated, 2006.

Early Care and Education Enhances Recruitment

The accessibility of quality, affordable early care and education is a strong recruitment tool for businesses. A knowledge-based economy depends almost exclusively on skilled workers who have numerous choices for where they want to live. Montana is renowned for its natural beauty and easy-going residents, but for families with young children, quality of life also depends on parents knowing that their children have quality educational opportunities from birth through college. Businesses with strong early care and education benefits are more prepared to recruit the best and brightest more easily, both from the existing local labor market and workers outside the region.

Businesses with strong early care and education benefits are more prepared to recruit the best and brightest more easily.

Family-friendly policies indicate a company's commitment to the well-being of potential new employees and their personal lives, and make the company more attractive in a competitive workforce market. Particularly for highly specialized workers, company values are critical to attracting the best of the labor pool, with or without young children.

⁵⁶ CCH Incorporated. (2005).

⁵⁷ Hewitt Associates. (2001). *Hewitt Study Shows Work/Life Benefits Continue to Grow Despite Slowing Economy*. Retrieved from <http://www.was.hewitt.com>

St. Peter's Hospital in Helena recognizes the role that early care and education plays in recruiting and retaining the best employees. The hospital offers flexible work schedules and on-site child care for its 920 employees. Pete's Place Day Care is one of the few providers in the Helena area offering part-time care and care during extended hours.

Tuition costs are below the state average and they have a sliding scale for low-income hospital employees. According to Jane Morell-Hart, Pete's Place Child Care Center Coordinator, "On site, reliable, convenient, high quality and affordable child care acts as an attractive enticement tool during the recruitment process," and staff feel a strong incentive to stay rather than lose affordable, high-quality care (personal conversation with Jane Morell-Hart, Pete's Place Child Care Coordinator).

"On-site, reliable, convenient, high-quality and affordable child care acts as an attractive enticement tool during the recruitment process."

-Jane Morell-Hart, Coordinator of Pete's Place Child Care Center at St. Peter's Hospital, Helena

Early Care and Education Increases Productivity

Working parents who know their children are in high-quality care and education settings are better able to focus on their jobs. Employees with inadequate early care and education are more likely to be late for work, absent or distracted than parents who are confident about their children's early care and education arrangements.⁵⁸ Working parents often worry about their school-age children during the time period between the end of the school day and when parents get home. This effect has been named Parental After-School Stress (PASS). Parents with high levels of PASS are more likely to experience negative productivity-related patterns than parents with low PASS, including job distractions, missed work, making errors and missing meetings and deadlines. Parents are more at risk for PASS when their children spend more time unsupervised after school and their jobs are less flexible.⁵⁹

PrintingForLess.com is an e-commerce, commercial printing company based in Livingston. With 180 employees, they produce items such as business cards, calendars and brochures for 60,000 customers throughout the country. As a strategy to recruit and retain talented workers, PrintingForLess.com provides on-site, licensed child care for 25 children, ages 0-5. The company also offers referral services for children who are ready to graduate from the on-site program. In a company where even small losses in productivity are costly, having on-site child care allows employees to focus on their jobs. Since the company invests a great deal of money in training its employees, supporting family life and engaging its employees is essential to its success (personal phone conversation with Marne Reed, Director of Human Resources at PrintingForLess.com, on October 24, 2007).

PrintingForLess.com in Livingston offers child care benefits because in a company where even small losses in productivity are costly, it allows employees to focus on their jobs.

⁵⁸ Brown, J. (2002). *How Does High-quality Child Care Benefit Business and the Local Economy*. Seattle: Economic Policy Institute.

⁵⁹ The Community, Families & Work Program. (2004). *Parental After-School Stress Project*.

Early care and education benefits do not just benefit employees with children. Based on data compiled from more than 140,000 employees at various companies nationwide, 78 percent of workers feel their work environment would improve if their co-workers' early care and education needs were addressed.⁶⁰ Ms. Morell-Hart from the early care and education center at St. Peter's Hospital in Helena indicated that access to convenient and reliable early care and education is also an attractive benefit for employees without young children because they do not need to cover for their peers during unscheduled absences (personal conversation with Jane Morell-Hart, Pete's Place Child Care Coordinator).

All workers benefit when early care and education needs are met.

Early Care and Education Options for Businesses of All Sizes

Most employers miss out on the opportunity to lower absenteeism, boost recruitment and retention, and increase productivity, despite clear benefits to the bottom line. A small survey about early care and education was distributed to the business leaders in Montana through

A small survey showed that Montana businesses report offering some form of benefits to help their employees with young children. A more comprehensive survey is necessary to uncover how Montana businesses approach this issue.

the Montana Economic Development Association. While only a small number of surveys were returned, the results suggest that a significant number of Montana businesses offer some benefits that help parents care for their children.⁶¹ But of a variety of benefits, only one—flexible work hours—is supported by more than half of all businesses in Montana (see Table 1). A more comprehensive survey should be completed to fully understand how Montana businesses approach this issue.

These findings compare favorably to results from a survey by the U.S. Chamber of Commerce that found that only 32 percent of businesses report actively assisting “their employees in addressing challenges such as child or dependent care, transportation or housing.”⁶²

Interestingly, despite some of the low percentages of businesses that offer certain benefits, businesses do see child care benefits as important for their workers. In the survey to members of the Montana Economic Development Association, well over half (64 percent) reported that child care benefits were “very important” or “extremely important” both for retaining employees and for helping employees get to and be productive at work. Slightly less than half responded that child care benefits were extremely or very important for recruiting employees.⁶³

Six out of ten Montana business leaders reported that child care was “extremely” or “very” important to helping employees get to and be productive at work.

⁶⁰ Burud, S. (2002). As cited by the United Way of the Bay Area and One Small Step in *Choosing Care: An Employers' Guide to Child Care Options*.

⁶¹ On-line survey conducted in February 2008, sent to members of the Montana Economic Development Association.

⁶² U.S. Chamber of Commerce, Center for Workforce Preparation. (2001). *Keeping Competitive: Hiring, Training, and Retaining Qualified Workers*.

⁶³ On-line survey conducted in February 2008, sent to members of the Montana Economic Development Association.

Table 1
Percentages of Montana Businesses that Report Offering
Various Child Care Benefits, 2008

Benefit	Yes	No	Do Not Know
On-site childcare	4%	96%	0%
Financial assistance to employees for child care	10%	90%	0%
Partnership with local child care services	6%	93%	1%
Assistance with back-up child care	6%	94%	0%
Assistance with child care when children are sick	13%	87%	0%
Dependent care pre-tax spending account	49%	50%	1%
Flexible work hours	71%	29%	1%
Tele-commuting	43%	53%	4%
Job-sharing	32%	61%	7%
Paid parental leave	42%	53%	6%
Other child care benefit	3%	89%	8%

While many companies are challenged by the rising costs of fringe benefits, small firms in particular struggle to provide benefits such as health care and early care and education benefits. However, smaller businesses have access to a number of innovative strategies that rely on their ability to be flexible and help employees solve early care and education issues individually, and there are a variety of cost-efficient ways to support employees' early care and education needs.⁶⁴

That said, offering these benefits on an informal or case-by-case basis can backfire for small companies—a national study by the Center for Work-Life Policy found that the lack of formal policies typical in small companies led to confusion and turnover among employees as well as a lack of understanding among employers about the cost savings and productivity gains that can be achieved through simple strategies to balance work and life.⁶⁵

There are a variety of ways to support employees' child care needs however, regardless of business size, type, or location. And, many of these activities not only support businesses' current employees but go farther by helping the economy in the long term as well. Some businesses invest not just so their employees can work, but also so Montana's parents have quality early care and education options for their children. Allowing parents to work flex-time hours, for example, may enable them to use a quality early care and education slot that would otherwise be inaccessible.

In October 2006, business leaders throughout Montana met at a Business Leaders Summit on School Readiness to discuss effective strategies for business to invest in

⁶⁴ Susan Smith Hendrickson. (2006). *Helping employees with child care isn't hopelessly expensive*. San Francisco Business Times.

⁶⁵ Center for Work Life Policy. (2006). *Work Life Balance in Small Business*. Retrieved September 5, 2006 from <http://www.worklifepolicy.org/documents/initiatives-smallbusiness.pdf>.

young children to help Montana be workforce ready.⁶⁶ See the box below for specific strategies.

Montana child care professionals have already identified a variety of ways that businesses of all sizes in all parts of Montana can support early care and education:

- Sponsor parent education classes
- Provide more information regarding child care and other family services
- Offer flex time benefits for employees
- Provide on-site early care and education
- Support early care and education legislation
- Provide flexible options for parents with sick children
- Build consortiums of businesses to work together on early childhood issues
- Support the expansion of preschools, Head Start and Early Head Start and other quality services for children
- Encourage and support employee volunteering in programs that serve young children
- Provide part time employees with a regular work schedule
- Allow employees to bring their babies to work
- Accommodate breast feeding mothers
- Permit employees to work at home when possible/necessary
- Become involved with existing programs
- Create job sharing opportunities
- Promote philanthropic investment in early childhood programs and services
- Supply space to the community for meetings
- Set up pre-tax spending accounts for employees that can be used for child care
- Donate goods and services
- Ask employees and co-workers how their employer can support them and their families

⁶⁶ Office of the Governor (2006). *2006 Governor's Summits on School Readiness in Montana: Executive Summary*. Retrieved from http://governor.mt.gov/boed/docs/exec_summary_summit.pdf December 7, 2007.

High-Quality Early Care and Education Builds a Ready Workforce

Developing a well-prepared workforce, a healthy economy, and vibrant communities with high standards for quality of life requires a long-term view. This section describes the importance of early care and education to achieving those goals.

Decades of research have sought to understand the effects of early care and education on young children. The positive effects that return to children, their families, and their communities from investing in quality early care and education also pay off for taxpayers, with one study showing a surprising 12 percent public rate of return, meaning a financial return to the public rather than just to a private individual.

While no early care and education program can guarantee lifelong success for its participants, a number of large surveys and long-term studies have consistently found that high-quality early care and education programs are beneficial to young children's growth and development. These positive effects directly contribute to children's success in the early K-12 years, which boosts their chances of succeeding later in life as well.⁶⁷ And, as the next subsections describe, these studies have also found that quality early care and education offers financial returns, surpassing the effects of traditional economic development investments. As an essential component of the education system that cultivates the future workforce, early care and education helps ensure a healthy Montana in the future, with a skilled workforce and prosperous families and communities.

A number of large surveys and long-term studies have consistently found that high-quality early care and education programs are beneficial to young children's growth and development.

Research by James Heckman, Nobel Laureate in Economics, confirms that a child's early years provide the foundation for a full range of human competencies including cognitive, linguistic, social and emotional.⁶⁸

Quality Early Care and Education Prepares Children for Success in School

Quality early care and education lays the foundation for strong academic performance, social skills, and discipline—key elements for continued success in K-12 classrooms. A U.S. survey found that in comparison to peers in lower-quality care settings, young children who attend higher-quality and more stable early care and education programs had the following characteristics through elementary school:

⁶⁷ Brooks-Gunn, J. (2003). Do You Believe in Magic? What We Can Expect from Early Childhood Intervention Programs. *Social Policy Report*. 17 (1).

⁶⁸ Heckman, J. (2006). *The Technology and Neuroscience of Skill Formation*. PowerPoint presentation for the Invest in Kids Working Group.

- Improved math and language ability
- Enhanced cognitive and social skills
- Fewer behavioral issues⁶⁹

The Committee for Economic Development (CED), a national nonpartisan research and policy organization made up of CEOs and University Presidents, highlights the need for an inclusive education system. CED urged the nation:

...to view education as an investment, not an expense, and to develop a comprehensive and coordinated strategy of human investment. Such a strategy should redefine education as a process that begins at birth and encompasses all aspects of children's early development, including their physical, social, emotional, and cognitive growth.⁷⁰

In a recent rigorous evaluation of the Arkansas Better Chance Program (ABC), a high-quality preschool program, researchers found that ABC has significantly increased school readiness indicators, including early language, literacy and mathematical development.⁷¹ These findings are consistent with findings from rigorous evaluations of state-funded preschool programs in other states, including New Jersey's Abbott Preschool Program and Oklahoma's Early Childhood Four-Year-Old Program.⁷²⁻⁷³

Quality ECE programs boost success in K-12, and are an important part of Montana's education system, which must meet the rigorous demands of a knowledge-based economy.

Programs for infants and toddlers are also building blocks for school readiness. In a study exploring the effectiveness of Early Head Start in meeting the needs of low-income families, researchers at the U.S. Department of Health and Human Services found that Early Head Start significantly and positively impacted infants and toddlers by:

- Increasing cognitive development and reducing the number of children at-risk for developmental delays
- Improving language development
- Strengthening parenting skills of participants⁷⁴

⁶⁹ Peisner-Feinberg, E. S. et al. (2001). The Relation of Preschool Child-Care Quality to Children's Cognitive and Social Development Trajectories through Second Grade. *Child Development*. 72 (5): 1534-1553. Quality was assessed in this study using the following criteria: classroom quality measures using the Early Childhood Environment Rating Scale (ECERS), teacher sensitivity using the Caregiver Interaction Scale (CIS), child-centered teaching style using Early Childhood Observation Form (ECOF), teacher responsiveness using Adult Involvement Scale (AIS). In addition, teacher-child relationship and child assessment measures were used.

⁷⁰ Committee for Economic Development. (2004). As cited from *Exceptional Returns* by the Economic Policy Institute.

⁷¹ Hustedt, J.T. et al. (2007). *The Effects of the Arkansas Better Chance Program on Young Children's School Readiness*. Retrieved on February 15, 2007 from: <http://nieer.org/resources/research/ArkansasYear1.pdf>.

⁷² Lamy, C. et al. (2005). *Giant Steps for the Littlest Children: Progress in the Sixth Year of the Abbott Preschool Program. Year Three Initial Update, 2004-2005*. Early Learning Improvement Consortium. Available at <http://www.nj.gov/njded/ece/abbott/giantsteps/>.

⁷³ Barnett, W.S. et al. (2005). The Effects of State Prekindergarten Programs on Young Children's School Readiness in Five States. Retrieved on February 20, 2007 from: <http://nieer.org/resources/research/multistate/fullreport.pdf>

⁷⁴ Love, et al. (2004). *Making a Difference in the Lives of Infants and Toddlers and Their Families: The Impacts of Early Head Start, Volume: Final Technical Report*. Washington, DC: U.S. Department of Health and Human Services, xvi-xvii.

There is no direct quantitative information for Montana on how increased preparedness of Montana’s youngest children would benefit Montana’s K-12 schools, but there is a comprehensive plan to increase Montana’s children’s school readiness. In meetings of twenty community teams and one state-level team, Montana leaders developed strategies for coordinating services for young children so that every child enters school ready to succeed. Teams discussed who needs to be involved, what is working well, and what needs improvement. The overall framework, borrowed from Rhode Island, is the Ready Child Equation, a formula for ensuring school readiness. The formula is:

$$\begin{array}{l} \text{Ready Families} + \\ \text{Ready Services} + \\ \text{Ready Communities} + \\ \text{Ready Schools} = \\ \hline \text{Children Ready for School and a Ready Workforce}^{75} \end{array}$$

The formula requires engagement from stakeholders in addition to parents and service providers to ensure school readiness. The formula also includes the components of high-quality early care and education programs that show exceptional outcomes for children, indicating that the school readiness model is likely to maximize social and economic returns.

Three-quarters of Montana’s business leaders responded in a survey that child care is “extremely important” or “very important” in preparing children for school.

In a survey of Montana business leaders, more than three-quarters of respondents said that child care was “very important” or “extremely important” in preparing children for school.⁷⁶

Some school districts in Montana have recognized the importance of investments in early childhood programs as a critical building block of school readiness. The Choteau school board in Teton County has invested in the Boost pre-kindergarten program for four years through federal Title I funds. The half-day, four-month program in the spring offers young students a chance to acquire basic skills they will need to be successful when they enter kindergarten in the fall. According to the local paper *Choteau Acantha*, an English Teacher at a Junior High School said that deciding whether to fund the Boost prekindergarten program hinged on “whether the elementary school uses the Title I funds to help pre-kindergarten students gain the skills they need before they enter kindergarten through Boost” or whether they use the same funds for remedial education later on.⁷⁷

Building a Ready Workforce

While no long-term studies have specifically focused on the children of Montana, there are long-term studies from other parts of the country that provide evidence of the long-term benefits of quality early care and education for families and the economy. These studies show benefits particularly for low-income children. The three long-term studies

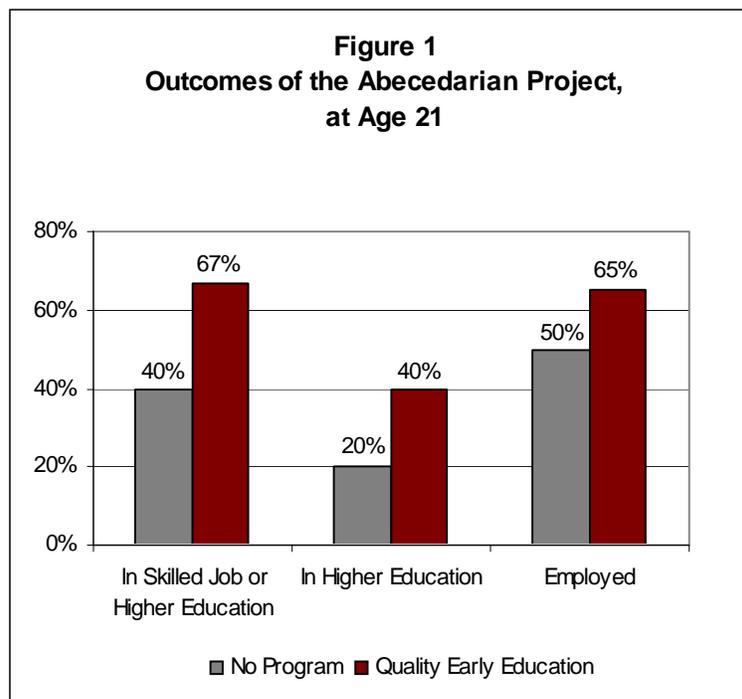
⁷⁵ Office of the Governor (2006). *2006 Governor’s Summits on School Readiness in Montana: Executive Summary*. Retrieved from http://governor.mt.gov/boed/docs/exec_summary_summit.pdf December 7, 2007.

⁷⁶ On-line survey conducted in February 2008, sent to members of the Montana Economic Development Association.

⁷⁷ As quoted in Martinsen, Melody. “School board okays Boost program, drops MQEC membership.” *Choteau Acantha*. Available at <http://www.choteauacantha.com/articles/2008/02/21/news/news2.txt>

that are described below all investigated high-quality early care and education programs. Common quality elements across the three studies include qualified staff of teachers with specific training in early education, low teacher turnover rates, and classrooms with low child-to-teacher ratios.⁷⁸

In the first of these studies, known as the Abecedarian Study, a group of low-income children was randomly assigned to an early intervention program that lasted from birth through age four and a second group of participants was not offered the program. The investigators found that children who participated in the early intervention program were, at age 21, significantly more likely to be in a high-skilled job or in higher education (see Figure 1).⁷⁹



Source: The Frank Porter Graham Child Development Institute

The second long-term study illustrates the effectiveness of high-quality early care and education in preventing long-term, negative outcomes. In a study of Chicago Child-Parent Centers (CPCs), low-income children in a high-quality, child-focused intervention program were less likely than their peers to drop out of high school, be in special education, repeat a grade, or be arrested as juveniles.⁸⁰ In particular, the Chicago CPC study found that children who did not participate in the program were 70 percent more

⁷⁸ While experts differ on the precise definition of what constitutes “high-quality” early care and education programs, there is general agreement that programs with these three elements qualify.

⁷⁹ See The Frank Porter Graham Child Development Institute at the University of North Carolina at Chapel Hill, *Early Learning, Later Success: The Abecedarian Study*. Available online at <http://www.fpg.unc.edu/~abc/>

⁸⁰ Reynolds, A.J. et al. (2001). Long-term effects of an early childhood intervention on educational achievement and juvenile arrest—A 15-year follow-up of low-income children in public schools. *Journal of American Medical Association*. 285 (18): 2239-2346.

likely to be arrested for a violent crime by the age of 18 than those children who did go to quality early care and education.⁸¹

Long-term studies show that quality ECE programs increase positive outcomes in adulthood, such as owning a home and having a job, and decrease negative outcomes, such as dropping out of high school and being arrested for violent crimes.

And, the third long-term study demonstrates the increased likelihood of positive outcomes and the decreased likelihood of negative outcomes. The High/Scope Perry Preschool Project compared adults at age 40 who received high-quality early care and education as young children with peers who did not.⁸² The study found that the group of adults who had received early childhood education instruction earned more money, were more likely to have a savings account, and were less likely to be repeat criminal offenders than their peers who were not randomly assigned to the program as children.

A knowledge-based economy requires education for life. Early care and education provides the foundation for future learning, so that individuals can adapt to new jobs, and Montana can adapt to a rapidly changing world.

High-Quality Early Care and Education Offer a Significant Public Return

Economists have analyzed the overall costs and benefits of the three early care and education programs mentioned above, revealing significant returns on investment in each program (see Table 1 for summary).⁸³

A study by economists at the Federal Reserve Bank in Minneapolis used the High/Scope Perry Preschool Project findings to estimate the returns on public investment from reduced spending and increased tax payments resulting from quality early care and education. Quality early childhood development programs for low-income children generate a 16 percent rate of return on investment, 12 percent of which is a public rate of return.⁸⁴ Researchers found that, "...studies find that well-focused investments in early childhood development yield high public as well as private returns."⁸⁵ They demonstrate that the High/Scope Perry Preschool Program's 16 percent return on investment (when adjusted for inflation) is considerably higher than the long-term return on U.S. stocks, 7 percent (see Figure 2).⁸⁶

⁸¹ Fight Crime: Invest in Kids California. (2006). *Paying the Price for the High Cost of Preschool in California*. Retrieved from <http://www.fightcrime.org/ca>

⁸² Schweinhart, L. J., Montie, J., Xiang, Z., Barnett, W. S., Belfield, C. R., & Nores, M. (2005). *Lifetime Effects: The High/Scope Perry Preschool Study through Age 40*. Monographs of the High/Scope Educational Research Foundation, 14. Ypsilanti, MI: High/Scope Press.

Reynolds, A.J. et al. (2006). Reynolds, A.J. and Temple, J.A. (2006). "Economic Returns of Investments in Preschool Education." *A Vision for Universal Preschool Education*; pp 37-68. The Chicago CPC and the Perry Preschool Project were both half-day programs. The Abecedarian was a full-day project. Values are in constant dollars and based on a 3% discount rate.

⁸⁴ Rolnick, A and Grunewald, R. (2003). Early Childhood Development: Economic Development with a High Public Return. *Fedgazette*. Minneapolis, MN: Federal Reserve Bank of Minneapolis.

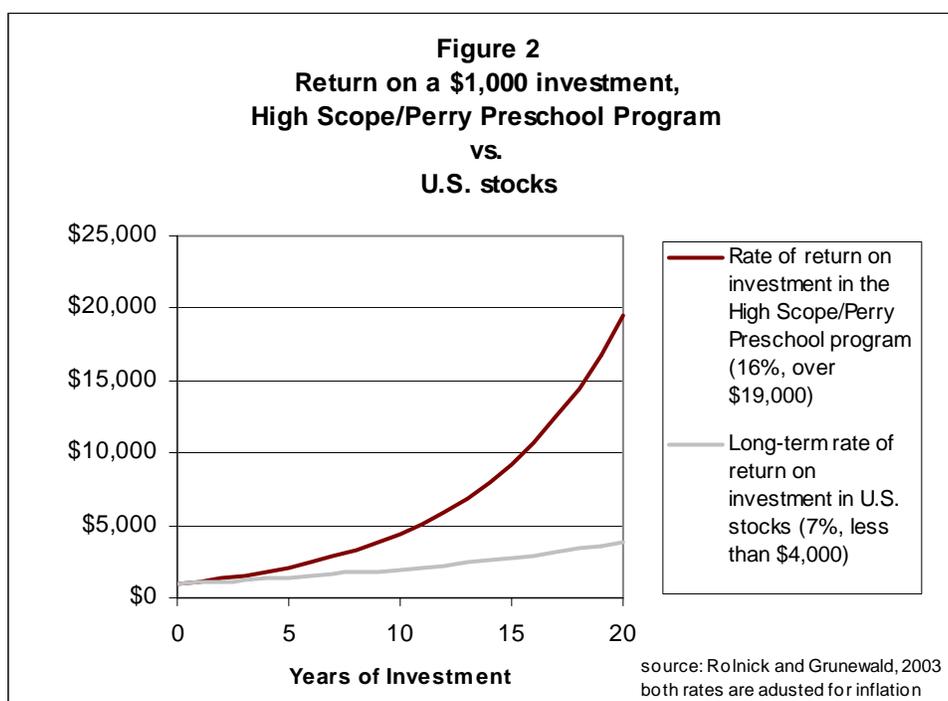
⁸⁵ Rolnick, A and Grunewald, R. (2003).

⁸⁶ Rolnick, A and Grunewald, R. (2003).

Table 1
Summary of Costs and Benefits per Participant in 2002 Dollars for
Three Early Care and Education Programs

	Ages of Children in Program	Number of Years Child is in Program	Average Annual Cost Per Child	Total Cost of Program Per Child	Lifetime Benefit to Society Per Child
Chicago CPC Study	3 through 9	2	\$4,856	\$7,384	\$74,981
Perry Preschool Project	3 and 4	2	\$9,759	\$15,844	\$138,486
Abecedarian Project	0 through 4	5	\$13,900	\$35,864	\$135,546

Source: Reynolds, A.J. and Temple, J.A., 2006.⁸⁷



“...studies find that well-focused investments in early childhood development yield high public as well as private returns.”

Arthur Rolnick, Senior Vice President and Director of Research; and Rob Grunewald, Regional Economic Analyst, Federal Reserve Bank of Minneapolis

Another area of investment sometimes overlooked, but important to mention in this report, are after-school programs. After-school programs for school-age children also save public sector dollars. A review of multiple research studies to evaluate the effects of

⁸⁷ Children frequently did not attend the program for the intended number of years, so the total cost of program per child did not equal the number of years in the program multiplied by the average annual cost of the program per child.

after-school programs showed significant gains to school engagement, school attendance, academic performance and positive youth development.⁸⁸ A cost-benefit analysis found that financial benefits from improved school performance, increased compensation, reduced juvenile and adult criminal activity, and reduced welfare costs outweighed the costs of increased attendance at school and the cost of programs.⁸⁹

Increasing the Quality of Early Care and Education in Montana

Ensuring that parents have the option to choose high-quality early care and education will benefit Montana. While it is outside of the scope of this report to quantify the estimated long-term savings particularly for Montana from improved outcomes for children, the information presented above details the long-term benefits to Montana's families and economy from investing in high-quality early care and education.

How can Montanans increase the quality of early care and education programs to get these remarkable outcomes and return on investment? A system of measuring and improving quality is critical. Montana's quality rating system is being updated and the new system will be released. It articulates a set of measurable criteria for each level of quality for different types of early care and education, including centers, family child care homes, and Head Start providers. The quality rating system is accompanied by a program that offers incentives and resources to providers to increase quality. In addition, the Montana Early Childhood Project, housed in the Department of Health and Human Development at Montana State University, runs a statewide career development program which includes a registry of providers, a training approval system, trainer directory, and scholarships for program accreditation and Child Development Associate (CDA) assessment.⁹⁰

Long-term studies of the results of quality for Montana's children will help to build the case for increased investment in the quality of the education that programs provide. There has been no formal evaluation of Montana's quality rating system, for example, and no long-term study of the effects of quality early care and education on outcomes for Montana children. Borrowing from other studies' robust findings, however, investments in quality—from teacher education and compensation, to the business stability of early care and education businesses, to families' access to quality education programs—will go a long way to boosting children's outcomes and getting the most from Montana's early care and education system.

⁸⁸ Rolnick, A. and Grunewald, R. (2003).

⁸⁹ Brown, W.O. et al. (2002). *The Costs and Benefits of After-school Programs: The Estimated Effects of the After School Education and Safety Program Act of 2002*. Claremont, CA: The Rose Institute.

⁹⁰ <http://www.montana.edu/wwwecp/career.html>. Retrieved April 30, 2008.

Recommendations

The early care and education industry in Montana provides a vital service to communities and supports the current and future economy by:

- Generating significant jobs and revenue directly
- Enabling parents to work and/or update their skills, ensuring a well-prepared and ready workforce for today
- Increasing school readiness and improving K-12 outcomes
- Building a ready workforce for the future

All of these impacts of early care and education rely on ready families, services, communities, and schools. These stakeholders have the ability to maximize the economic contributions of early care and education in Montana.

Based on the findings in this report, there are three main areas in which these stakeholders should work together to strengthen the industry and its impacts. The stakeholders must work in partnership to:

- **Enhance the affordability and accessibility of quality early care and education.** Currently, many working families struggle to find care during the hours they work and at rates they can afford.
- **Improve the quality and sustainability of existing early care and education businesses.** Many providers are still at lower tiers of quality, and there is no formal quality rating and improvement system for unregistered providers. And, the number of registered family child care homes has decreased over the past five years.
- **Increase the number of formal early care and education spaces available to parents and their children.** The 20,000 spaces in licensed or registered facilities must serve 103,000 children between birth and age eight. Of those, 68,400 live with working parents.

Within each of these broad recommendations, there are specific actions that businesses, communities, governments (tribal, local, and state), and the early care and education industry itself can take to move Montana forward.

Business Strategies

Enhance the Affordability and Accessibility of Quality Early Care and Education

- **Address employees' early care and education needs.** Page 27 of this report includes an array of solutions by Montana leaders that help employees and benefit the bottom line. Local early care and education resource and referral agencies can also help with specific individual questions. Being proactive about employees' early care and education needs saves money in the long run.
- **Promote federal and state tax credits.** Business leaders can educate employees and invest in public education campaigns to encourage the use of tax credits that make early care and education more affordable, such as the Earned Income Tax Credit and the Dependent Care Tax Credit. Tax credits increase working families' spending power and benefit local economies.
- **Become early care and education advocates.** Business leaders who lend their voices to the importance of investing in young children help bring attention and engagement to the issue.

Improve the Quality and Sustainability of Existing Early Care and Education

- **Support quality improvement initiatives.** Business and business leaders can invest time, in-kind support, and funds to quality improvement programs. Right now, Montana has a quality rating system with clear steps for moving from one level to the next. In 2010, Montana will introduce an updated and improved program. Businesses can support nearby providers directly, or offer contributions to the state program. Montana's Early Childhood Services Bureau has more information at www.childcare.mt.gov.
- **Support providers' education attainment and skills training.** Businesses can offer tuition assistance and wage boosts for nearby early care and education providers who pursue additional training and/or higher education. And, businesses can sponsor classrooms for early childhood development at higher education institutions and training centers.⁹¹
- **Participate on local early care and education planning boards.** A stronger link between businesses and local early care and education boards will strengthen programs' effectiveness and help parents work more productively. Business leaders can join School Readiness Community Teams, Early Learning Councils, Boards of local resource and referral agencies and non-profit providers (see www.childcare.mt.gov for more information).

Increase the Number of Licensed or Registered Early Care and Education Spaces

- **Support facilities development, renovation, and expansion.** Businesses with large campuses may be able to build an early care and education facility themselves, but many others can support nearby early care and education facilities. Sponsoring bricks- and-mortar facility development allows for a public display of a company's good corporate citizenship and commitment to education.
- **Incorporate early care and education into development projects.** Development projects should include space for early care and education to build up the community's infrastructure and quality of life.

⁹¹ One example is the Phyllis J. Washington Education Center at the University of Montana. More information can be found at www.soe.umt.edu.

Public Sector Strategies

Enhance the Affordability and Accessibility of Quality Early Care and Education

- **Promote state and federal tax credits.** Government agencies can partner with businesses to encourage families' use of the Earned Income and Dependent Care Tax Credits. Other states offer tax credits to improve program quality.
- **Implement a more comprehensive sliding scale of tuition assistance eligibility.** The income eligibility threshold is set too low to include all families that need assistance. Raising the threshold ensures that more parents have licensed or registered early care and education options for their children.
- **Support providers' education attainment, skills training, and compensation.** Existing professional development efforts need increased support, with industry-wide wage incentives for increased skill acquisition. Institutions and programs that train early care and education professionals need stronger agreements to facilitate more intermediate and advanced professional development options through comprehensive, coordinated curricula.
- **Implement new financing mechanisms for early childhood education, such as tax incentives, new dedicated funding streams, or an endowment.** New financing mechanisms will help ensure that the early care and education system meets the needs of Montana's families.
- **Educate others about the economic impact of early care and education.** Legislators and other public policy makers should understand the public and private sector strategies to address the issues in a comprehensive manner.
- **Serve as a model employer.** Ensuring that government workers' early care and education needs are met will set an example for other Montana employers.

Improve the Quality and Sustainability of Existing Early Care and Education

- **Increase public investment in quality initiatives.** Through the Early Childhood Services Bureau, Montana must continue to provide grants, stipends, and incentives that stimulate efforts to increase quality among existing providers. The public K-12 program must also integrate seamlessly with quality early care.
- **Link early care and education entrepreneurs to business development services.** The Business Resources Division of the Montana Department of Commerce may be resources for early care and education entrepreneurs.⁹²

Increase the Number of Licensed or Registered Early Care and Education Spaces

- **Integrate early care and education into regional and local planning.** Local and regional development and economic plans and projects using funds from the Big Sky Economic Development Trust Fund and the Montana Main Street Program can benefit from addressing local early care and education needs.⁹³
- **Provide tax incentives for early care and education facility development.** Tax incentives can encourage property owners to offer below-market rent to early care and education providers, which reduces the cost of care for parents.

⁹² Business Resources Division, Montana Department of Commerce. *Working Together for Montana's Future*. More is available on-line at www.businessresources.mt.gov. The Department of Commerce offers small business development centers in ten locations throughout Montana which have loan funds and an Entrepreneur Development Program, which teaches business skills to aspiring business owners. In addition, the Business Resources Division has Microbusiness Development Centers in five locations. These centers offer fixed-rate loans up to \$35,000 to small businesses.

⁹³ Business Resources Division, Montana Department of Commerce. *Working Together for Montana's Future*. More is available on-line at www.businessresources.mt.gov.

Early Care and Education Strategies

Enhance the Affordability and Accessibility of Quality Early Care and Education

- **Lower costs by making shared purchases.** Forming a consortium or trade association of early care and education providers allows shared purchases and saves money. Forming a benefits pool may reduce costs of providing health insurance and retirement benefits to teachers and staff.
- **Meet the market demand for care during non-traditional hours.** While resource and referral agencies offer parents options to meet their early care and education needs, the agencies typically don't partner directly with local businesses to ensure the availability of care during specific work shifts. Resource and referral can reach out to businesses in health care, manufacturing, and retail to partner in meeting their employees' needs.

Improve the Quality and Sustainability of Existing Early Care and Education

- **Build public awareness.** Agencies who oversee the early care and education system, such as the Montana Department of Public Health and Human Services, Early Childhood Services Bureau; the Montana Resource and Referral Network; the Montana School Readiness Teams; and others, should present the information in this report to parents, business leaders, and government officials so they understand the industry's economic contribution to Montana, and the benefits of investing in quality.
- **Encourage education and skills attainment by early care and education workforce.** Taking part in the professional development system to improve skills and education levels will boost quality and children's outcomes.
- **Promote a career and wage lattice.** Wage scales, personnel policies, and training systems should be clearly aligned so additional training results in career and wage advancement.
- **Integrate in-home providers into the early care and education industry.** In-home providers who are not licensed or registered make up a significant part of Montana's overall system for caring for children. They should receive specialized training in early childhood development and encouragement to register.
- **Join local economic development and downtown business boards and Chambers of Commerce.** Early care and education businesses are an important part of the business environment in communities, and owners should think of themselves as part of the business community.

Increase the Number of Licensed or Registered Early Care and Education Spaces

- **Build public awareness.** Helping leaders throughout Montana understand the industry's economic contribution to Montana, particularly among leaders of other important industries, and the need for more formal spaces for Montana's families, will encourage partnership and effort on the issue.
- **Stop the decrease in the number of family child care homes.** Early care and education leaders should analyze and address the reasons behind the decrease in the number of family child care homes over the past five years.

Ultimately, Montana’s future economic productivity depends upon investment in quality early care and education as a critical industry. The short-term economic benefits to working families and their employers are apparent. Equally important are the long-term benefits in human capital—children, their school readiness, and the productivity of our future workforce. Montana can maximize the economic benefits from its early care and education industry by promoting and implementing these strategies and recommendations. Through building partnerships, businesses, the public sector and the early care and education industry itself will strengthen the early care and education industry so it can meet the needs of working families and their children more effectively.

Appendix A

Indirect and Induced Multiplier Effects of the Early Care and Education Industry

Every industry, including early care and education, is linked to the rest of the economy in a number of ways, reflecting the fact that establishments purchase supplied from other businesses and the industry's employees spend their earnings in part on locally produced goods and services. The linkages of the early care and education industry in Montana can be measured using an input-output model and its associated multipliers, a methodology used by some economic development specialists. While the multiplier methodology is not without controversy, these estimates illustrate that early care and education is an important, integrated component of the Montana economy, through its direct employment, output, and economic linkages.

The estimates for the impact of early care and education on indirect and induced effects are based on an Input-Output (IO) model created by a Minnesota-based company called IMPLAN. The model estimates the goods and services purchased by industries in Montana. Industries that rely on local goods and services keep more money in the local economy. Thus, the "ripple" effect of dollars spent in that industry is larger than in another industry that spends more outside of the local or regional economy.

The multiplier effect estimates the links between an industry and other areas of the economy. For this analysis, Type II multipliers, which exclude government spending, are used (see Table 1). Estimates for the impact of early care and education on the economy are based on three primary types of multipliers:

- Direct effects: effects introduced into the county's economy as a result of spending on early care and education
- Indirect effects: effects reflecting spending by the early care and education industry
- Induced effects: effects on household spending by the early care and education industry. These changes reflect changes in the county's economy caused by increases or decreases in spending patterns as a result of the direct and indirect activity.

	Type II Multiplier
Output	1.88
Employment	1.54

Source: IMPLAN, 2000.⁹⁴

⁹⁴ Liu, Z., Ribeiro R. and Warner, M. (2004). *Comparing Child Care Multipliers in the Regional Economy: Analysis from 50 States*, Ithaca, NY: Cornell Univ. Dept of City and Regional Planning.

The multipliers in early care and education are significantly higher than most other industries. A report by Cornell University shows that the Type II employment multiplier for hotel and lodging is 1.18; eating and drinking is 1.28, and banking is 1.44. The only industry profiled with a multiplier greater was management and consulting services at 1.75. Similarly, the Type II output multiplier for early care and education is 1.53, larger than eating and drinking at 1.28, hotel and lodging at 1.29, and banking at 1.22, and management and consulting services at 1.32.⁹⁵

These multipliers may be used to assess indirect and induced effects of these economic indicators. Based on a gross receipts output estimate of \$143.4 million in early care and education, an additional \$126.2 million is generated in other industries, resulting in a total economic impact of \$269.6 million.

And, based on a direct employment estimate of 6,611 jobs in early care and education, 3,570 indirect jobs are sustained by licensed early care and education, for a total economic impact of 10,181 jobs.

⁹⁵ Liu, Z., Ribeiro R. and Warner, M. (2004). *Comparing Child Care Multipliers in the Regional Economy: Analysis from 50 States*, Ithaca, NY: Cornell Univ. Dept of City and Regional Planning.

Appendix B

Glossary

21st Century Community Learning Centers

Throughout Montana, federal funds support before- and after-school programs called 21st Century Community Learning Centers. These are administered by the Office of Public Instruction and allocated through a competitive grant. The programs provide academic enrichment designed to reinforce and complement regular academic programs and offer literacy and educational development to families, particularly those of low income.⁹⁶

Head Start and Early Head Start (includes tribal and non-tribal programs)

Head Start is a federally funded program for low income children ages 3-5 and their parents. Early Head Start is federally funded to serve low income pregnant women and children ages 0-3 and their parents. They are designed to increase readiness for school by supporting all domains of a child's development and by encouraging and engaging families. There is no state or local oversight for these programs.⁹⁷

Licensed Child Care Centers

The Montana Department of Public Health and Human Services licenses or registers a variety of early care and education programs, including private for-profit and not-for-profit licensed child care centers and some Head Start, Early Head Start and Native American Head Start programs.

Migrant Education Program

The Office of Public Instruction allocates federal funds to school districts so they may serve migrant children. The programs are run in areas with significant seasonal agricultural work: Billings, Deer Lodge, Dillon, Fromberg, Hardin, Huntley Project, Lewistown, Missoula, Polson, and Sidney.⁹⁸

Registered Family Child Care Homes

The Montana Department of Public Health and Human Services registers family child care homes and group family homes. Registered family child care homes are independent small businesses that provide care and education for no more than six children at one time. Registration requires a criminal background check and a child protective services check, proof of immunizations, liability insurance, and orientation. To maintain registration, providers must attend eight hours of training annually.

⁹⁶ Information from the Montana Office of Public Instruction, <http://www.opi.state.mt.us/21Cent/Index.html>. Retrieved February 26, 2008.

⁹⁷ US Department of Health and Human Services, Administration for Children, Youth and Families; Head Start website at <http://www2.acf.dhhs.gov/programs/hsb/about/index.htm>.

⁹⁸ Interview with Montana's Migrant Program Director Angela Branz-Spall on September 27, 2007 and information pulled from <http://opi.mt.gov/Migrant/index.html> on February 26, 2008.

Registered Group Child Care Homes

The Montana Department of Public Health and Human Services registers family child care homes and group family homes. Registered group child care homes are independent, small businesses that provide care and education for up to 12 children, and require two adult providers. Registration requires a criminal background check and a child protective services check, proof of immunizations, liability insurance, and orientation. To maintain registration, providers must attend eight hours of training annually.

State-Funded Special Education Public Preschools

Montana school districts operate programs for preschool children with special needs. Programs for eligible children are individualized and designed to provide free and appropriate education in the least restrictive environment possible. Information on local funds could not be collected for this report, even though school districts may contribute local funds to these programs.

United States Department of Agriculture Child and Adult Care Food Program⁹⁹

Good nutrition is an essential component of health and effective learning for young children. The United States Department of Agriculture administers a program called the Child and Adult Care Food Program. The program's goal is to improve and maintain the health and nutritional status of children and adults in care while promoting the development of good eating habits. They offer payments for the purchase of healthy foods to programs serving poor and low-income children.

Unregistered In-home Providers

Unregistered providers are also known as family, friend, and neighbor caregivers. Some families that receive state funds towards early care and education services select care by unregistered individuals, who provide services outside of licensed or registered programs, but must comply with minimal expectations including a criminal background check and a child protective services check. These caregivers receive public funds, and thus their economic contribution is measurable, so they are included in this report.

⁹⁹ United States Department of Agriculture. More information is available at <http://www.fns.usda.gov/cnd/care/cacfp/cacfphome.htm>.