Missouri DEPARTMENT OF ELEMENTARY & SECONDARY EDUCATION

Office of Early and Extended Learning

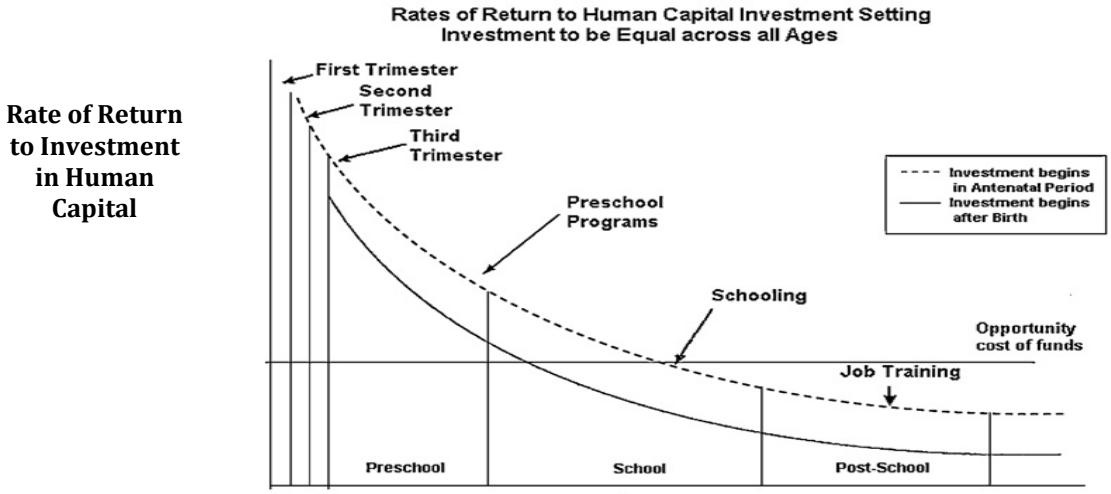
Benefits of Early Childhood Education: The Facts

High-quality Early Childhood Programs A summary of the Benefits			
Child Outcomes		**Adult Outcomes**	
Higher rate of:	1. Completing high school 2. Above-average test scores 3. Positive attitudes toward school among children and parents	*Higher rate of:*	1. Stable employment 2. Home and car ownership 3. Family involvement 4. Educational attainment
Lower rate of:	1. Remedial education 2. Special education	*Lower rate of:*	1. Social service use 2. Criminal involvement 3. Substance abuse

- Total brain size is 95 percent of maximum size by age 6, although cortical and subcortical components of the brain change dramatically during childhood and adolescence.[1]
- Although evidence of the achievement gap can be identified among children as young as 9 months of age, recent research indicates most, *if not all*, of the achievement gap found at age 5 (at school entry) and at age 8 could be eliminated by an intensive two-year early childhood program for infants and toddlers (age 1-3 years).[2,3]
- According to Nobel prize-winning economist Dr. James Heckman, the most cost-effective route to strengthening the workforce is to invest in early education, "A large body of empirical work at the interface of neuroscience and social science has established that fundamental cognitive and non-cognitive skills are produced in the early years of childhood, *long before children start kindergarten*…. Later remediation [repeating grades in school, job training, GED] of early deficits is costly, and often prohibitively so."[4]
- Research indicates that statistically significant short-term and long-term gains in cognitive development are made by children who participate in early education programs.Three recent meta-analyses of over 120 research studies indicate that child gain scores remain strong for 5-10 years beyond school entry and approximately 80 percent of children who participated in such programs outperformed their peers who did not participate in the high-quality early care and education programs.[5,6,7]
- When examining the academic records of two groups of students (high school graduates and dropouts), researchers found the dropouts had consistently lower scores in reading, writing, math and spelling when compared to the graduates. *These differences between the two groups of students were evident as early as kindergarten* and the disparities increased throughout their academic careers.[8]
- Longitudinal studies indicate a societal return on investment ranging from $3-$16 return per $1 invested in early education (average of $10 ROI).[9]
- One of the most significant economic impacts of attending an early childhood program is the long-term reduction in crime costs. For every $1 invested in early childhood education, the program repays $12.90. Almost all of these net benefits derive from reductions in crime by the male participants.[10]
- Investments in early education programs provide significant long-term dividends. This is especially true for children who are *most* at risk for poor outcomes. Children who attended high-quality early childhood programs experienced a significantly more positive developmental trajectory through their school-age years and into adulthood when compared to peers who did not attend high quality early childhood programs (see summary table below).[9,10,11]

Perhaps most striking is the recent work of noble-prize winning economist Dr. James Heckman (figure 1). His research indicates the greatest return on investment in human capital formation (knowledge and skill development) occurs during the prenatal, infant/toddler, and preschool period. [12]

Figure 1: ***Rate of Return to Investment in Human Capital Formation***[12]



Rates of Return to Human Capital Investments Setting Investments to be Equal across Ages

Invest Early in Human Capital Formation

As illustrated by Figure 1, the rate of return to investment in human capital is markedly greater when investments occur at younger ages. That is, while larger investments have been typically made in secondary education, higher education, job training programs, and remedial education, the rate of return is notably lower than if these same funds were invested in human capital formation during the infant/toddler and preschool years.

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