

furthermore, underline the differential relationship of numerical mother-child interaction with arithmetic operations as the relationship is linear in kindergarten but quadratic in toddlerhood. Implications are discussed in terms of fostering numeracy. At last, limitations and suggestions for future research are outlined.

Early longitudinal development of executive functioning in two to three year olds

Experimental studies, Neuroscience, Cognitive development, Social sciences, Early childhood education, Lifelong learning

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Although previous studies have shown that executive functions can affect student learning, longitudinal studies into how executive functions develop in toddlerhood are still scarce. To get more insights into the developmental nature of executive functions, more research is needed into the relationships between different executive function components and how these components and their relationships develop in early childhood. The present study examines the relationships between three basic components of toddlers' executive functioning (selective attention, working memory and delay of gratification) and how these relationships develop over time. Additionally, differences between children based on ethnic and socio-economic background are discussed. A structural equation model is tested in which the relationships between EF components are hypothesized, using a sample of 284 toddlers of 30 preschools, tested at two waves (at 33 and 39 months of age). Our study shows that selective attention uniquely predicts working memory over time and not delay of gratification.

Measuring improvement using ECERS: A training intervention in pre-schools in one local authority

Mixed-method research, In-service teacher education, Reflection, Early childhood education, Learning in context

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This study was conducted over a period of three years within the context of a local education authority (LEA) in England. A quasi-experimental repeated measures mixed methods design was chosen to consider: first, the quality of all (approximately three hundred) pre-school settings within the county; and second, the impact of a short training intervention on a sample of fifty private, voluntary and independent (PVI) settings with matched controls. A baseline measure of quality was established through observations using Early Childhood Environment Rating Scales (ECERS) (Harms et al, 1998 and Sylva et al, 2003) together with structured interviews which focused on context and structure. The targeted training intervention significantly improved total quality scores on ECERS (Wilcoxon $z = -4.452$, $p = .000$). Interviews and focus groups suggested that change was attributable to aspects of leadership, the culture within the setting including