

## EDUCATIONAL PSYCHOLOGY

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### SOCIAL EMOTIONAL LEARNING: DEVELOPING THE ADOLESCENT

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#### Abstract

During the latter part of the 21st century, social emotional learning (SEL) started being incorporated into the classroom in a meaningful way. While SEL has garnered enough attention to be included in school curricula throughout the United States as well as several other countries worldwide, research about the import and effect of SEL is relatively new (America Succeeds, 2019). The worldwide COVID pandemic has brought about challenges beyond the obvious serious health concerns. Byproducts of the pandemic include the increased need for coping mechanisms and problem solving, interpersonal interaction skills, as well as an understanding of identity development to help children handle emotional distress resulting from the numerous significant changes in their daily lives. However, many current SEL programs do not address these key areas of concern. It is the authors' contention that an SEL curriculum which focuses on resilience as well as key indicators of identity development, coping mechanisms, and personal de-escalation techniques are necessary to effectively aid adolescents with navigating their current lives and building a positive future.

This research proposes a new SEL program that fits the needs of adolescents and preteens as administered in the school system. Building on a previous program shown to significantly improve self-esteem and school cohesion and trust (Cipra & Hall, 2019), Gr<sup>2</sup>IT focuses on several key principles to help children develop social and emotional skills and resiliency in the classroom and beyond. A unique component of the program is the principle of identity. Because identity formation is a significant developmental task, understanding the reinforcing and bidirectional relation between behavior and identity is beneficial to adolescents. Gr<sup>2</sup>IT incorporates principles of identity development throughout the curriculum. In conjunction with emotional regulatory practices, problem-solving strategies, and a social equity perspective, Gr<sup>2</sup>IT introduces a holistic approach to social and emotional learning to support the positive development of youth. While Gr<sup>2</sup>IT is currently being developed for American schools, many of the principles are universal to child development and may be adapted cross culturally.

**Keywords:** *Adolescent development, resilience, identity, curriculum.*

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### EDUCATIONAL ADVANCES ACROSS ALL LANGUAGE DOMAINS: RESULTS AND EXTENSIONS FROM THE DYNAMIC TRICKY MIX MODEL

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#### Abstract

This paper demonstrates how Dynamic Systems Theory (DST) can generate powerful educational interventions. Our multiple well-controlled studies include typically-developing children between 2 and 8 years of age as well as children with variations of language disorders and with ages between 4 and 12 years. Despite the wide variation in participant characteristics, we argue that our results demonstrate again and again a core conclusion: Rapid progress in language, literacy, and narrative skills only occurs when there is a favorable dynamic convergence of cognitive readiness, scaffolding partner strategies, positive emotional engagement by child and by partner, high attention, and freedom from distraction or anxiety. We term such favorable dynamic convergences Dynamic Tricky Mixes. Under such Dynamic Tricky Mix conditions children displayed significant advances in literacy, oral language, narrative, and sign language. Other labs have shown similar advances for second language learning. Moreover, and quite surprising, under rigorous equation of Learning Condition Mixes during intervention, children with prior histories of very poor learning learned at rates matching that of children with *no* prior learning

disabilities. This result held for deaf, autistic, dyslexic, and language-delayed children. These excellent learning rates by the children with severe learning disabilities will aid in planning more ambitious reforms in the language-and literacy-facilitating procedures of educators, special educators, and speech language pathologists. In addition, across all educational domains Dynamic Tricky Mix strategies are powerful catalysts for moving any child from a "stuck" position toward truly rapid learning. We draw further implications from our rapid vocabulary acquisition intervention work with ordinary 4-year-olds. In this case we demonstrated that with twice-weekly sessions vocabulary growth across 5 months leaped forward compared with matched control children. Many children learned at the astonishing rate of 20 new lexical items per hour. By the use of pretest/posttest comparison data on cognitive processes we further demonstrate that the experimentally-caused leap in vocabulary had cascading effects on improved memory and related cognitive skills. Thus, rapid gains by the intervention children dynamically fed into their becoming better prepared for further rapid gains in language acquisition. In turn, this set of findings enriches accounts at the theoretical level of how so much language learning usually can be achieved in the preschool years. Likewise, in evolutionary terms these kinds of mutual enhancements between language progress and cognitive processing power may help elucidate periods when there are explosive rates of changes in *Hominin* cultures and in brain size and capacity.

**Keywords:** *Children's language advances, dynamic systems, educational interventions, language.*

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## **CORRELATIONAL ANALYSIS BETWEEN APPROXIMATE NUMERICAL ESTIMATE AND MATH ABILITIES: A STUDY WITH FIRST-GRADE SCHOOL STUDENTS**

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### **Abstract**

The number sense has two characteristics: subitizing – the immediate and error-free recognition of numbers from one to three, without counting – and the ability to discriminate between numbers with values greater than the subitizable ones. Without counting, this type of discrimination is done by approximate estimate, from which a numerical approximation system is inferred. Although the approximate numerical estimate is considered innate, it is influenced by factors such as the ratio between the sets to be compared, external factors, in addition to its increasing accuracy with age. This cognitive ability has been identified as a “predictor” for academic achievement in mathematics. The presented research aimed to investigate the existence of a correlation between the approximate number estimate and math skills in first-grade school children. The study was carried out with 34 children aged between six and seven years old. Their math skills were measured using the Test of Early Mathematical Abilities (TEMA-3), which was administered following the protocol, designed to measure general formal and non-formal math skills of children from 3 to 8 years-old. The approximate number estimate was measured using *Panamath* – a software that managed the discrimination task –, consisting of comparisons of several pairs of sets, indicating the largest. The exposure time of the stimuli was set at 1200 ms and the ratio of the difference between the sets was systematically varied. The results showed an ease of distinction based on the proportions of the sets in the numerical approximation system test. This study investigated the possibility of a correlation between performance in the number sense activity with those of mathematical skills, as it is assumed that the greater the child's sensitivity to differentiating the proportions between sets, the better his performance in solving the mathematical problems addressed, accordingly to previous studies. Even though the Pearson's correlation coefficient was 0.31 ( $p = 0.07$ , a little higher than accepted), the value indicates a moderate to weak correlation and a possible prediction in mathematical abilities based on performance in the numerical discrimination task, although there are other variables to consider in the mathematical development. The approximate number system test can be used as a tool to do and initial track of children who might experience problems in developing math skills.

**Keywords:** *Numerical estimation, number sense, math abilities, counting.*

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