

19 August 2011 | \$10

Science



INVESTING EARLY IN EDUCATION

AAAS

REVIEW

Interventions Shown to Aid Executive Function Development in Children 4 to 12 Years Old

Adele Diamond^{1*} and Kathleen Lee¹

To be successful takes creativity, flexibility, self-control, and discipline. Central to all those are executive functions, including mentally playing with ideas, giving a considered rather than an impulsive response, and staying focused. Diverse activities have been shown to improve children's executive functions:

All successful programs involve repeated practice and progressively increase the challenge to executive functions. Children with worse executive functions benefit most from these activities;

To improve executive functions, focusing narrowly on them may not be as effective as also addressing emotional and social development

Die vorliegenden Daten belegen:

- diejenigen mit den größten Problemen profitieren am meisten

Those with the initially poorest EFs gain the most. Lower-income, lower-working-memory span, and ADHD children, and, in one study, boys [who often have poorer inhibitory control than girls (8)] generally show the most EF improvement from any program. Early EF training is thus an excellent candidate for leveling the playing field and reducing the achievement gap (48) between more- and less-advantaged children.

Die vorliegenden Daten belegen:

- Üben Üben Üben

EFs must be continually challenged to see improvements. Groups assigned to the same program, but without difficulty increasing, do not show EF gains.

Die vorliegenden Daten belegen:

- am Geld liegt es nicht!

Studies of curricula (35, 41) and curricula add-ons (43, 45, 46) demonstrate that EFs can be improved, even at 4 to 5 years of age, by regular teachers (given training and support) in regular classrooms without expensive equipment.

Die vorliegenden Daten belegen:

- in der Schule! (nicht irgendwie, irgendwo, irgendwann)

Public school curricula hold the greatest promise for accessibility to all and intervening early enough to get children on a positive trajectory from the start and affecting EFs most broadly.

Although schools are curtailing physical education and the arts, evidence indicates that the opposite is probably needed for the best academic results.

Die wichtigen (Schul-)
fächer sind:

Musik

Sport

Theaterspiel

Kunst

Die vorliegenden Daten belegen:

- Stillsitzen
bringt`s nicht, schadet!
- Freude, Selbstvertrauen, soziale Bindung
bringt`s!

The four curricula-based programs shown to enhance EFs have many commonalities

We'd like to highlight two: They do not expect young children to sit still for long. Such expectations are not developmentally appropriate, increase teacher-student tensions, and lead some children to dread school and/or to be wrongly labeled as having ADHD. Second, the programs tend to reduce stress in the classroom; cultivate joy, pride, and self-confidence; and foster social bonding; all of which support efforts to improve EFs and academic achievement.

PEDIATRICS®

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The Immediate Impact of Different Types of Television on Young Children's Executive Function

Angeline S. Lillard and Jennifer Peterson

Pediatrics; originally published online September 12, 2011;

DOI: 10.1542/peds.2010-1919

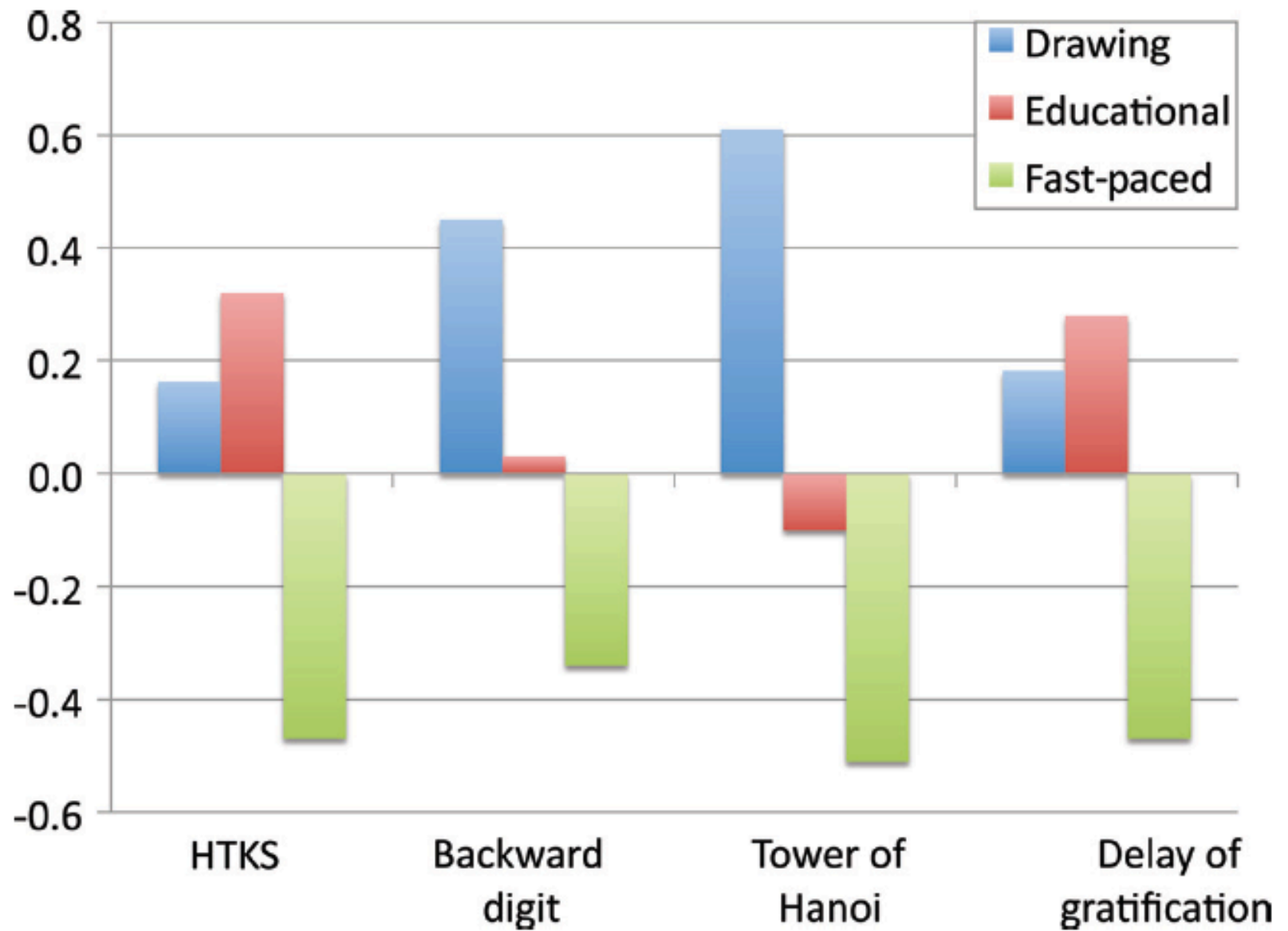


FIGURE 1
z scores for each task.

Bloß keine Stress!

Stress (49), loneliness (50), and lack of physical fitness (17) impair prefrontal cortex function and EFs. The best approaches to improving EFs and school outcomes will probably be those that (i) engage students' passionate interests, bringing them joy and pride;

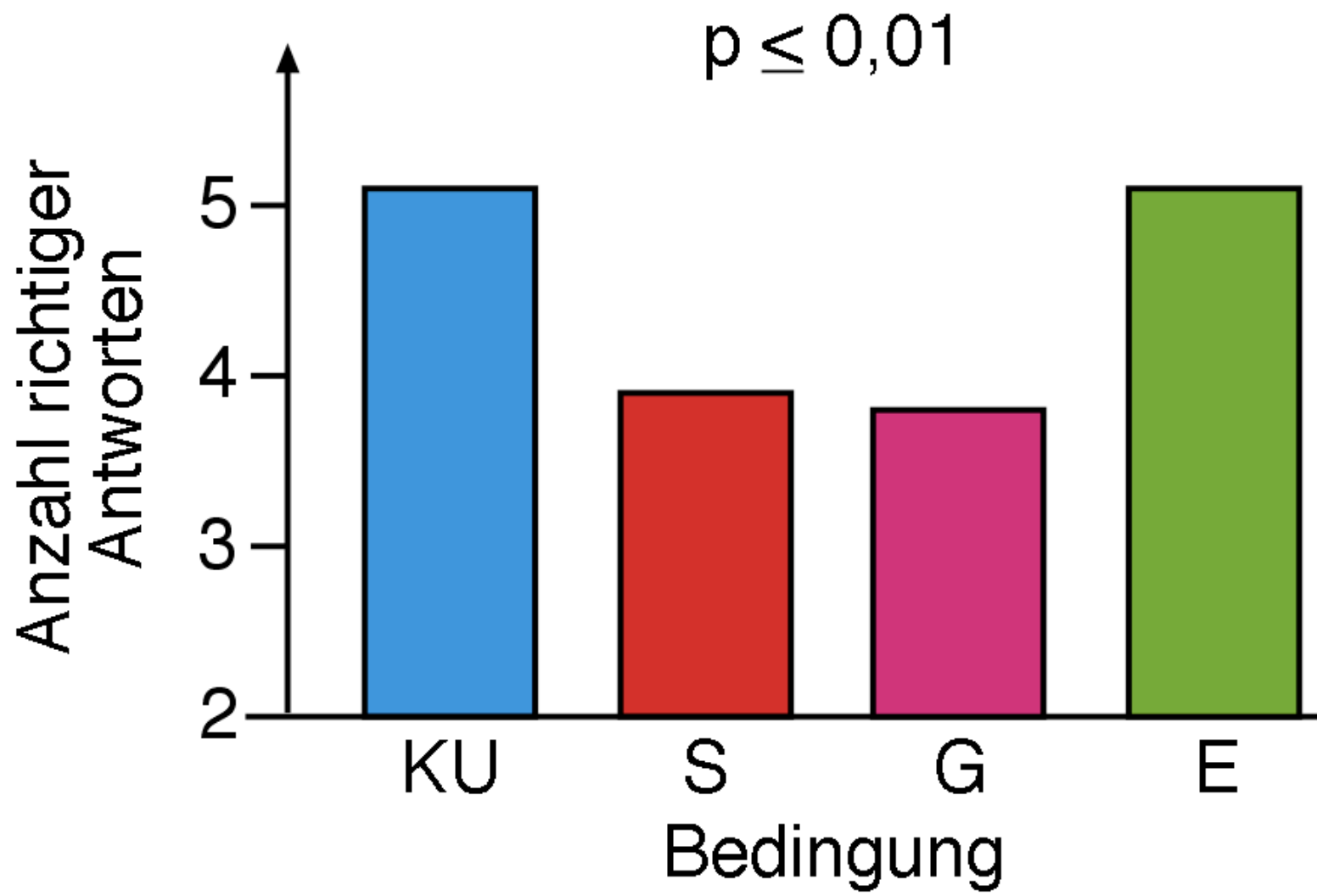
Freude!

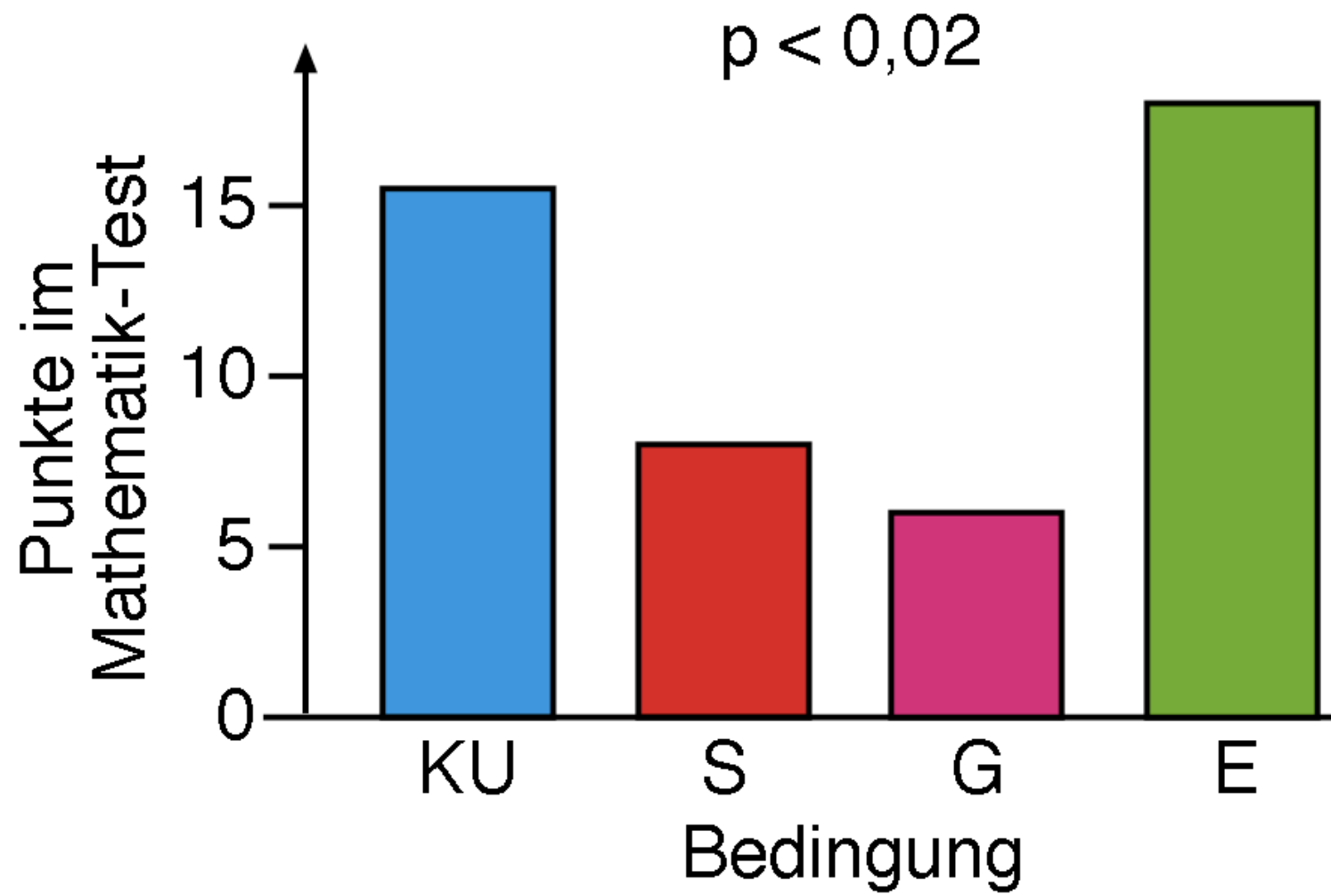
Exposure to Scientific Theories Affects Women's Math Performance

Ilan Dar-Nimrod and Steven J. Heine*

SCIENCE VOL 314 20 OCTOBER 2006

Bedingung	Beschreibung
Keine Geschlechterunterschiede (KU)	Eine Metaanalyse über verschiedene Länder ergab, dass Männer und Frauen in Mathematik-Tests gleich gut abschnitten.
Standard-Vorurteil (S)	Die Rolle des weiblichen Körpers in der Kunst wurde in Bezug zur weiblichen Identität diskutiert.
Erfahrung (E)	Männer sind 5% besser in Mathematik-Tests als Frauen, weil Lehrer an Jungen im Grundschulalter höhere Erwartungen stellen.
Genetik (G)	Männer sind 5% besser in Mathematik-Tests als Frauen, weil auf dem Y-Chromosom bestimmte Gene lokalisiert sind.





Recursive Processes in Self-Affirmation: Intervening to Close the Minority Achievement Gap

Geoffrey L. Cohen,^{1*} Julio Garcia,¹ Valerie Purdie-Vaughns,² Nancy Apfel,³ Patricia Brzustoski³

A 2-year follow-up of a randomized field experiment previously reported in *Science* is presented. A subtle intervention to lessen minority students' psychological threat related to being negatively stereotyped in school was tested in an experiment conducted three times with three independent cohorts ($N = 133, 149, \text{ and } 134$).

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Werteliste

- sportliche Fähigkeiten
- künstlerische Fähigkeiten
- schlau sein und gute Noten haben
- kreativ sein
- unabhängig sein
- im gegenwärtigen Moment leben
- Teil einer Gruppe zu sein (wie beispielsweise Deine Gemeinde, Deine Klasse oder Dein Schulclub)
- Musik
- Politik
- Beziehung zu Freunden oder zur Familie
- religiöse Werte
- Sinn für Humor

