



Integrating NP principles into educational practice

State of the art
and
implementation challenges



The Brain to Education Bridge.....

Dan Miller

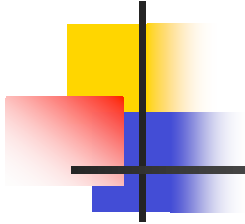
Texas Women's University

Hideaki Koizumi

Brain Science & Education Programs
Japan Science & Technology Agency

Jane Holmes Bernstein

Children's Hospital Boston, Moderator



- New approaches.....
- Major hurdles :

WITHIN PSYCHOLOGY
OUTSIDE PSYCHOLOGY



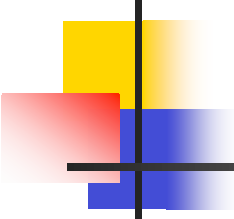
State of the art...

- There's another—very entrenched—model in education.....non-biological.....
- Need to make a very good case for the individual-differences perspective that 'matches' biology....



Individual-difference approaches...

We have lots of tools.....

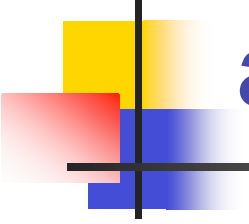


Individual-difference approaches...

We have lots of tools.....

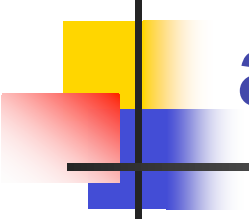
..also heavily influenced by static,
‘psychometric’

models



Individual-difference approaches...

....no good having tools if you don't know
how to use them.....



Individual-difference approaches...

....no good having tools if you don't know how to use
them.....

NEED FOR

**BIOLOGICALLY-BASED
THEORETICAL FRAMEWORK**

in which to work

!



Theoretical matrix....

- BRAIN.....



Theoretical matrix....

- BRAIN.....
 - Doesn't 'work' in a vacuum.....



Theoretical matrix....

- BRAIN.....
 - Doesn't 'work' in a vacuum.....
- Critically dependent on CONTEXT



Theoretical matrix....

- BRAIN.....
 - Doesn't 'work' in a vacuum.....
- CONTEXT
- Behavior emerges from
brain-context transactions

Brain-context transaction model



We will need good data
not only on **brain** variables
but also on **context** variables



Theoretical matrix...

The criterial feature of the child is that it develops....

Any theory of the child must include
developmental
change....

Theories of the child-as-learner must
include development



So, what else do we badly
need?

.....to know what happens over time.....



What do we badly need?

To know what happens over time.....

- Cohort studies



Cohort studies....

- Implementation in the US setting?



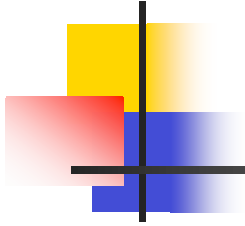
Cohort studies....

- Implementation in the US setting?
- Prospective?
 - What do we want to know?
 - Can we collect relevant data?



Cohort studies....

- Implementation in the US setting?
- Prospective?
 - What do we want to know?
 - Can we collect relevant data?
- Retrospective?
 - Do we have data already that could be productively mined?



Questions?

Comments?

Recommendations?