

# Giving parents feedback on individual children's progress on preschool educational platforms : [www.kizz.tv](http://www.kizz.tv)

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# Outline

- About CogniK.net (the company) and Kizz.TV (the platform)
- Collaboration CogniK <-> ICAR Research laboratory
- Giving parents feedback on children's use of Kizz.TV
  - Cognitive profiling
  - Which competencies are involved ?
  - Preview of Kizz.TV in Chinese
  - Evolution of cognitive profiles over one year
- Prospective research questions



# Enterprise CogniK : showcase Kizz.TV

- Online educational games provided by leading edutainments publishers Avanquest, Génération 5, Scholastic and Egmont
- Games are analyzed in terms of **cognitive competencies**
- We analyze children's (3-6 years) on-line activity and **personalize** their learning path, refining children's cognitive profiles in real time
- Games exist in French, Norwegian, Polish (in collaboration with Egmont) and now in Chinese (in collaboration with Children's Fun Publishing)



# Collaboration CogniK <-> ICAR Research laboratory

- **Cognitive profiling technology, adapted to children**
- Analysis and evaluation of educational computer games (3 studies)
- Analysis and evaluation of educational cartoons (2 studies)
- Peer explanations with a focus on gestures (1 study)

Research is inspired by:

Quest for  
fundamental  
understanding?

Considerations of use?

	No	Yes
Yes	Pure basic research (Bohr)	Use-inspired basic research (Pasteur)
No		Pure applied research (Edison)

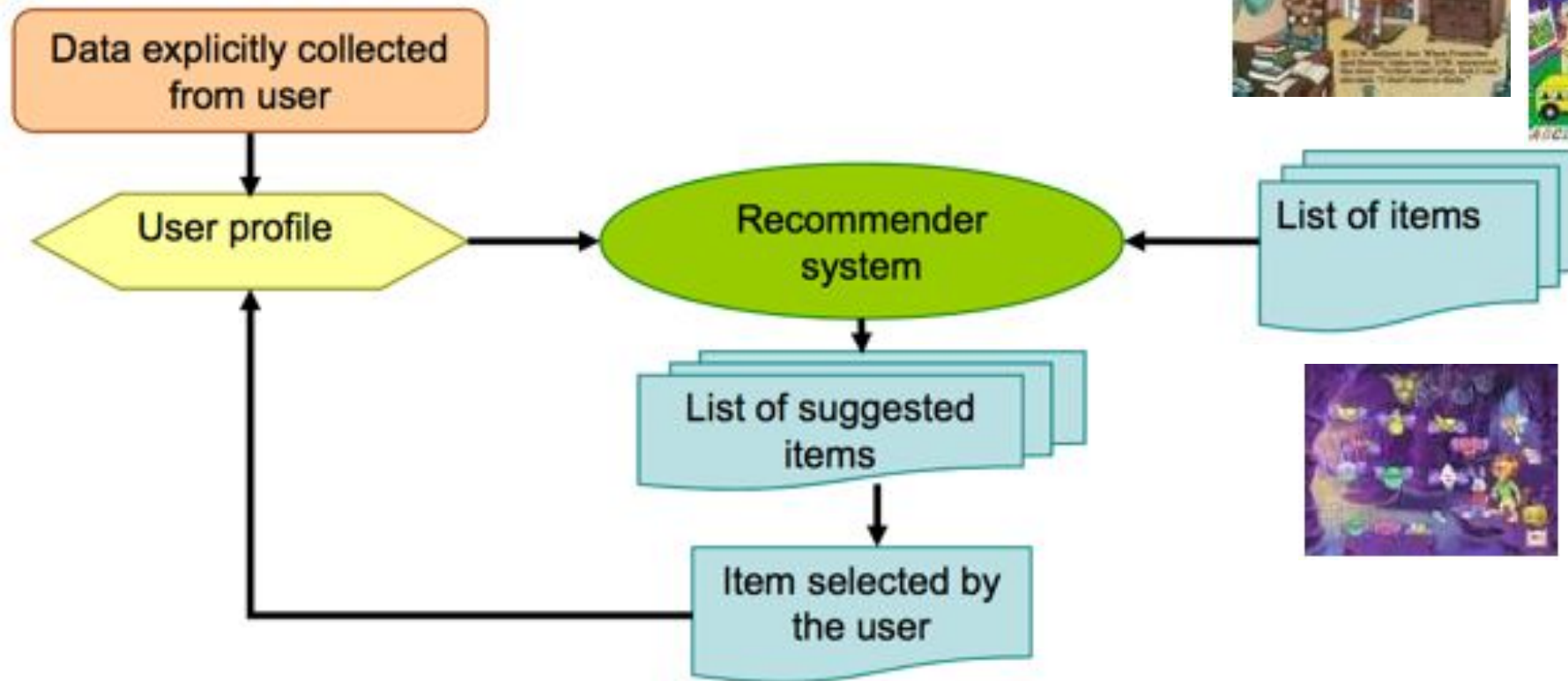
Stokes (1997). *Pasteur's quadrant: basic science and technological innovation*. The Brookings Institute, Washington, DC. (page 76)

# Parental perspective on Kizz.TV: control and involvement

- Parents set the rules
  - Time limits
  - Choice of focus
- Parents get feedback
  - How is child progressing in terms of cognitive competencies?

# Cognitive profiling

## Indicators of learner's activity



300 categorized games



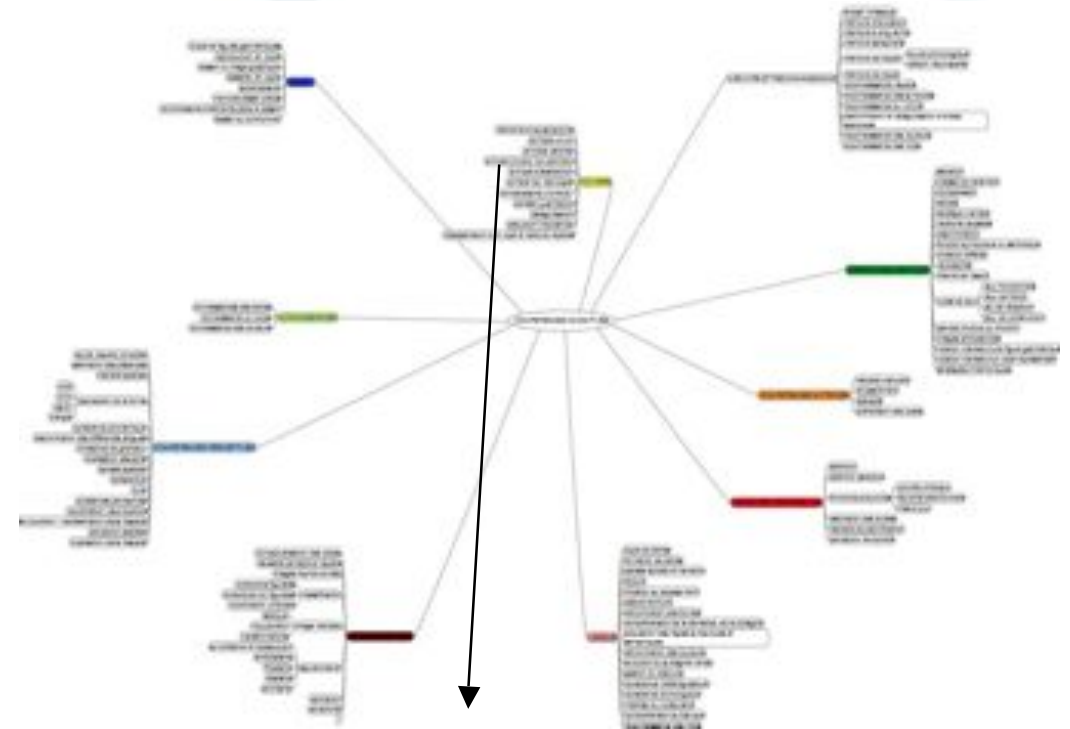


# Which competencies ?

- Elaboration and *continual refinement* of categorization schema for cognitive competencies
  - Name of cognitive competency
  - Description, example and *bibliography*
  - Mean age of acquisition



- 12 key competencies: Read, Write, Count, Order, Memorize, Analyze, Reason, Focus, Colors, Orienting in space, Sort, Mouse manipulation



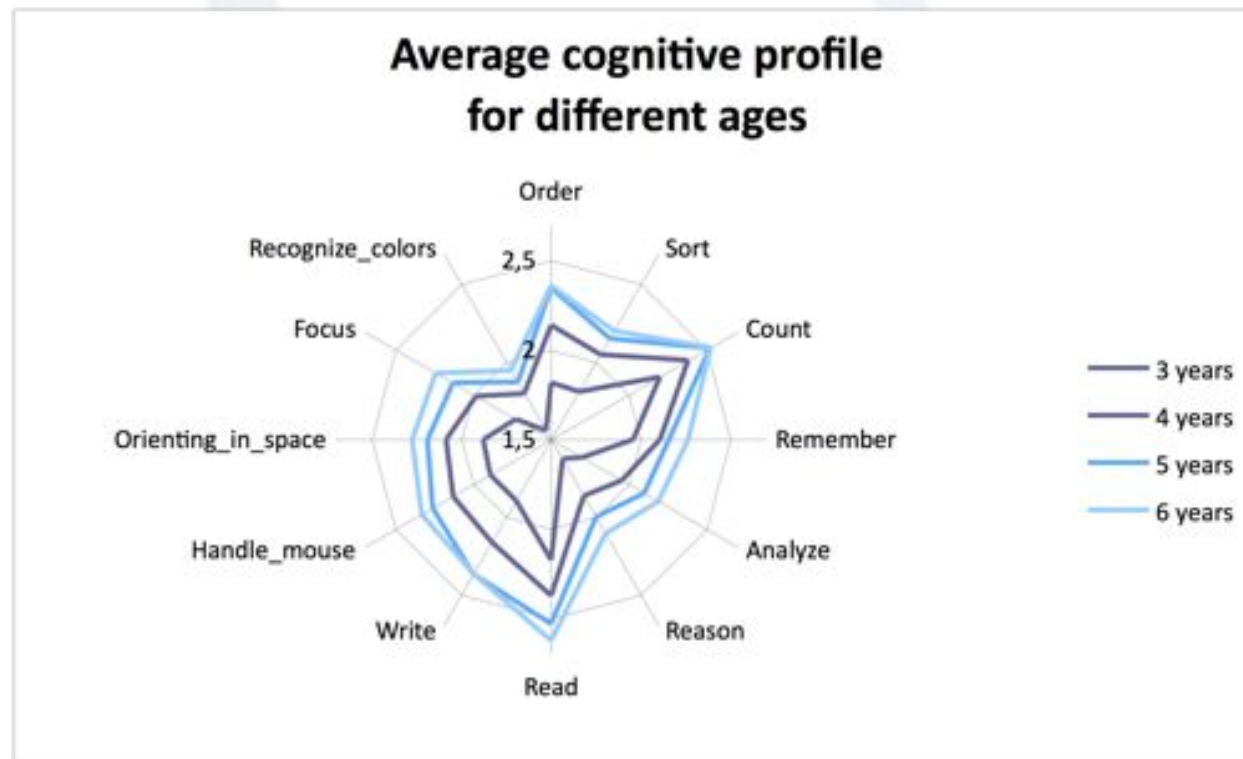
Addition and subtraction  
 Cardinal principal  
 Comparing numbers **Number**  
 Categorization  
 ...

# Preview of Kizz.TV in Chinese

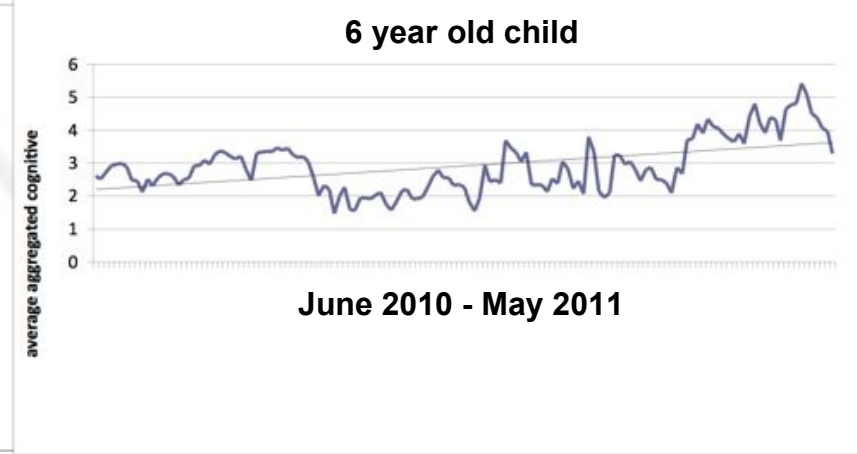
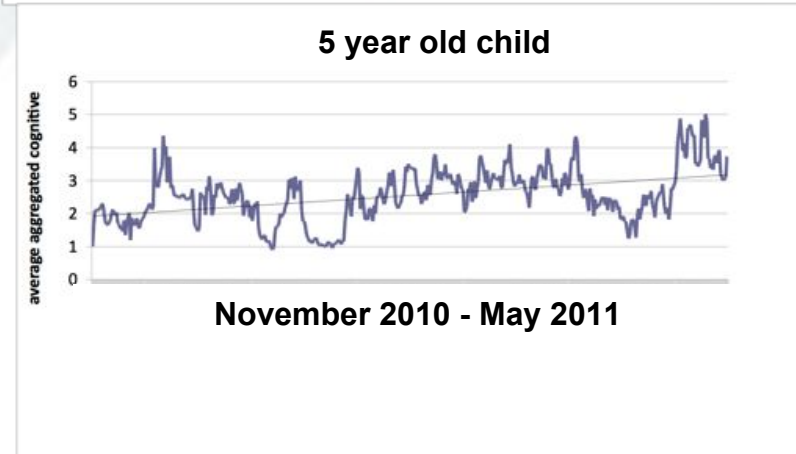
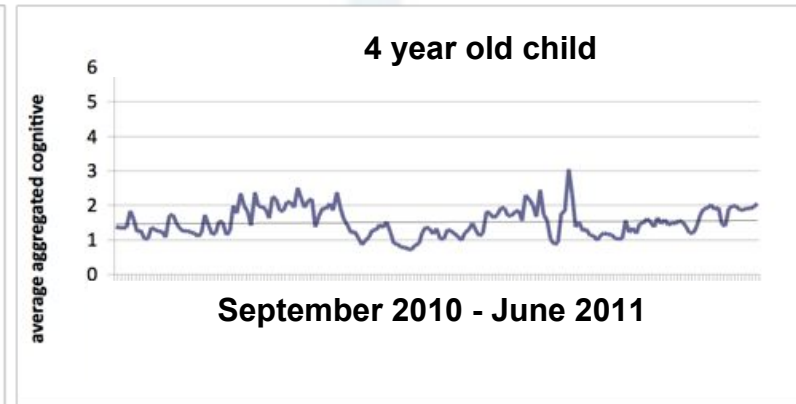
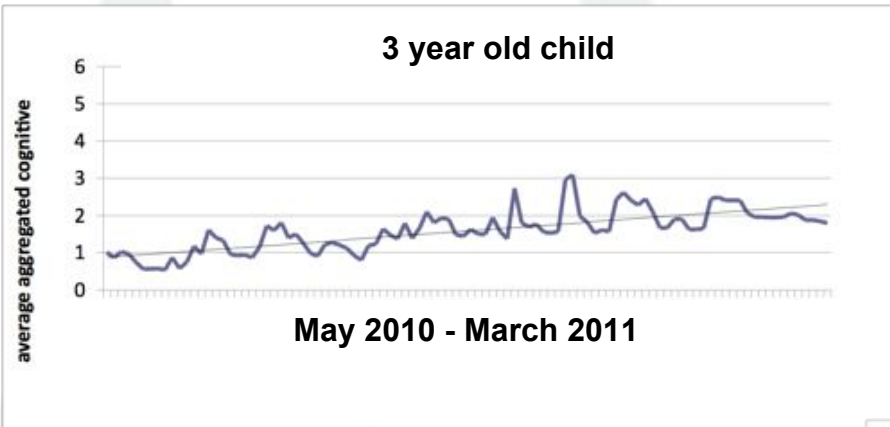




# Average cognitive profiles of 600 children 3 - 6 years old



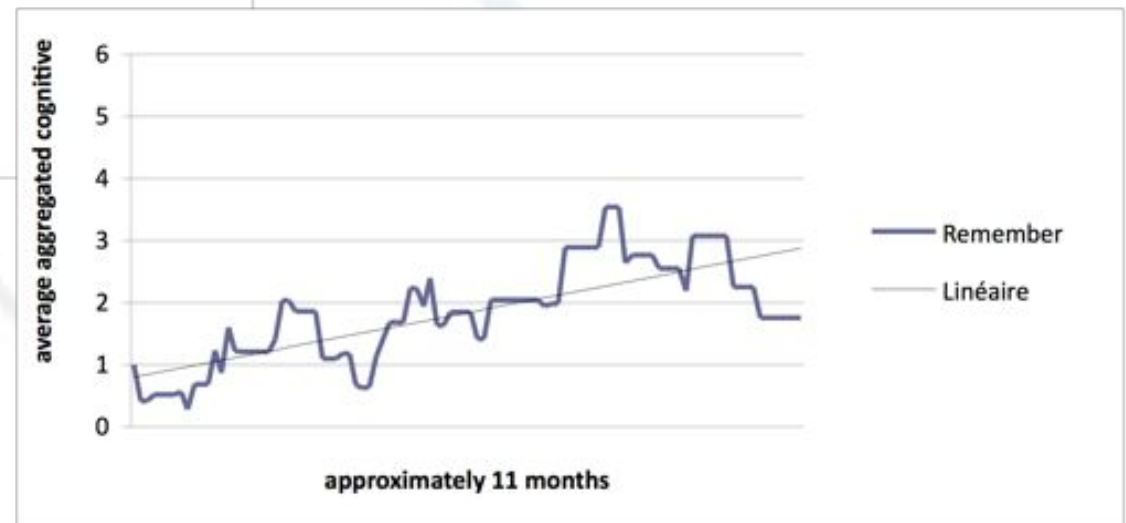
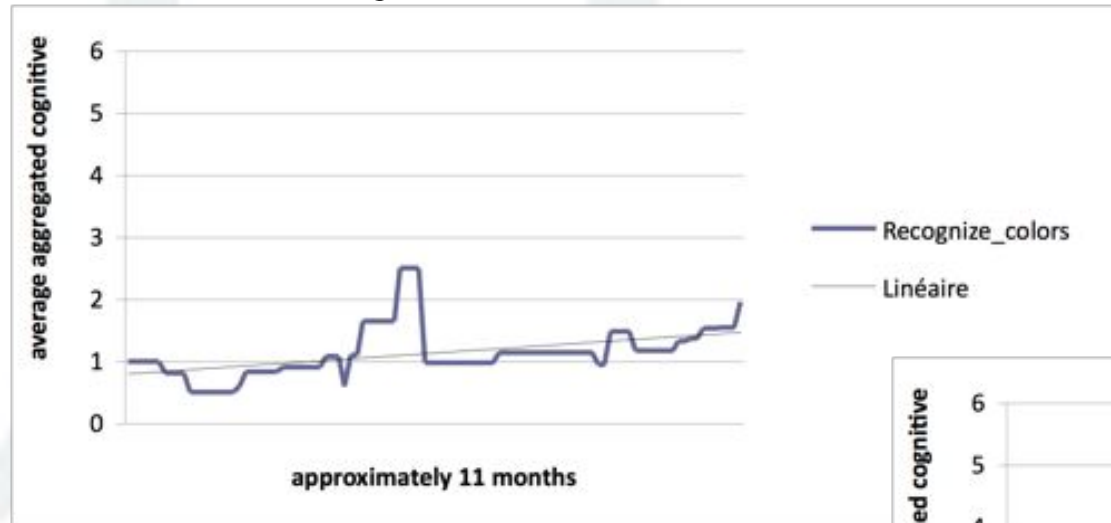
# Evolution of average aggregated cognitive profile of one child over c. one year for each age group



Child chosen at random

- Each time the child plays, his average aggregated cognitive profile is re-calculated

# Evolution of specific cognitive competency of one 3-year old child : colors / remembering



# Prospective research questions on cognitive profiles / skills

- What are explanations for peaks and valleys in skill progression?
  - Simple availability/repartition of games in the catalogue ?
  - Dependant on what games are offered and then chosen from those offered
- How do cognitive profiles as calculated on line compare to cognitive profiles as observed *in situ* during qualitative analyses ?
  - Evaluate accuracy of indicators
- On what bases could we propose higher-level indicators?

Thank-you !

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