



# "The Early Bird Gets the Worm"

## The Bilingual Zoo-Preschool in Magdeburg

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**EU-Project ELIAS**

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# Structure

## **1. Bilingual Education and Immersion**

Definition, Methodology

## **2. Bilingual Preschools**

Setup, Research Results

## **3. The EU-Project ELIAS**

Goals, Structure

## **4. The Bilingual Zoo-Preschool in Magdeburg**

Setup, Conceptual Design



# Bilingual Education

## 'Mother tongue plus two other languages': Making an Early Start

European Commission: Promoting Language Learning and Linguistic Diversity: An Action Plan 2004 – 2006, p. 7

*Language competencies are part of the core of skills that every citizen needs for training, employment, cultural exchange and personal fulfilment ... It is a priority for Member States to ensure that language learning in kindergarten and primary school is effective, for it is here that key attitudes towards other languages and cultures are formed, and the foundations for later language learning are laid, ... **in particular by teaching at least two foreign languages from a very early age.***



# Background

## Bilingual education / Immersion teaching

⇒ most effective method of teaching foreign languages (e.g. Genesee 1987; Wode 1995)



# Bilingual Education

## Results of Canadian Immersion studies

(e.g. Wesche 2002)

- the content knowledge is not negatively affected
- the development of the first language does not suffer
- attainment in second language is much higher than in traditional foreign language teaching
- more positive socio-psychological attitudes
- suited both for strong and weak learners

⇒ **enhancement of language and general cognitive skills without negative effects for content knowledge and first language**



# Bilingual Preschools

- *one person – one language* principle  
(Döpke 1992)  
⇒ native speakers of English as caregivers
- the children are enthusiastic and very proud of their L2 skills
- within a few weeks they understand the daily routines in the L2
- comprehension of the L2 precedes production
- same acquisition principles for lex. learning as L1  
(Rohde 2005)
- lexical acquisition up to the same level as L2 learners in England (Rohde & Tiefenthal 2002)



# Bilingual Preschools

## Examples

Researcher: Show me the mouth!

Child: *Die Maus is nich da.*

[The mouse is not there.]

Researcher: Look at the ducks over there!

Child: *Das ist doch kein Dach!*

[That's not a badger!]

Child: Eric is red, Paul is dead – and Tini is fat!



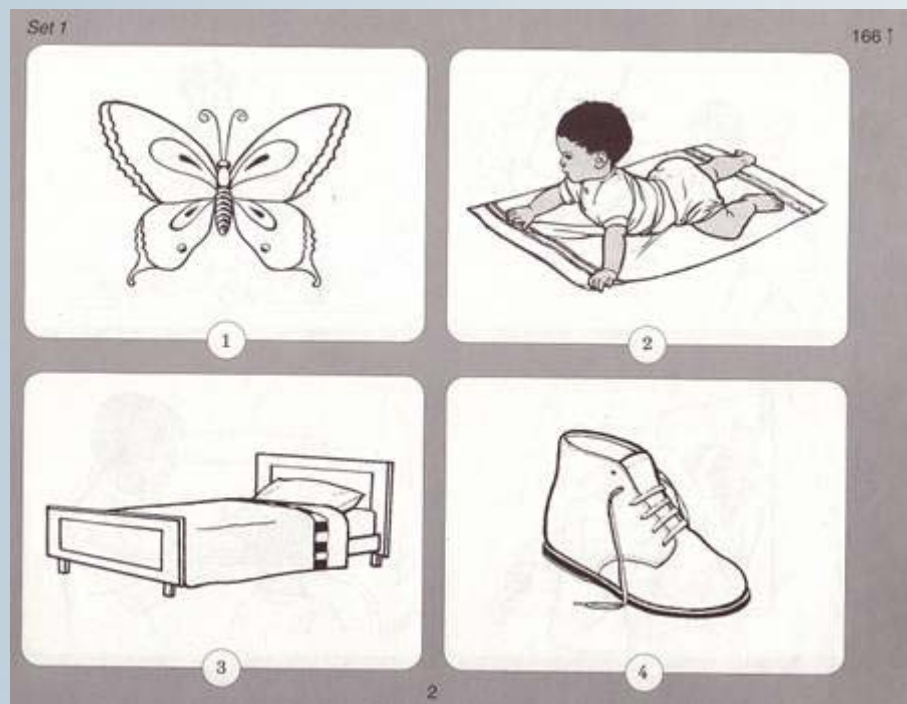


# Bilingual Preschools: Tests

**Lexicon** (Weitz 2008)

British Picture Vocabulary Scale (BPVS)

"Show me ... "

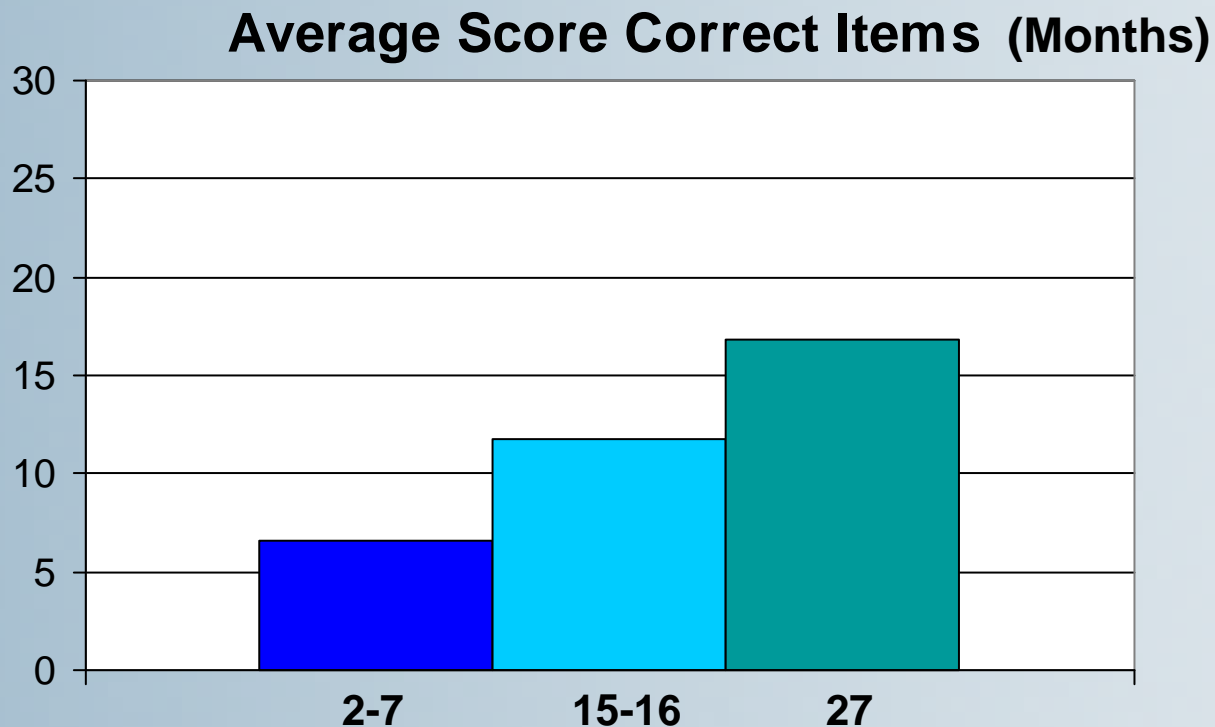






# Bilingual Preschools: Results

## Lexicon (Weitz 2008)



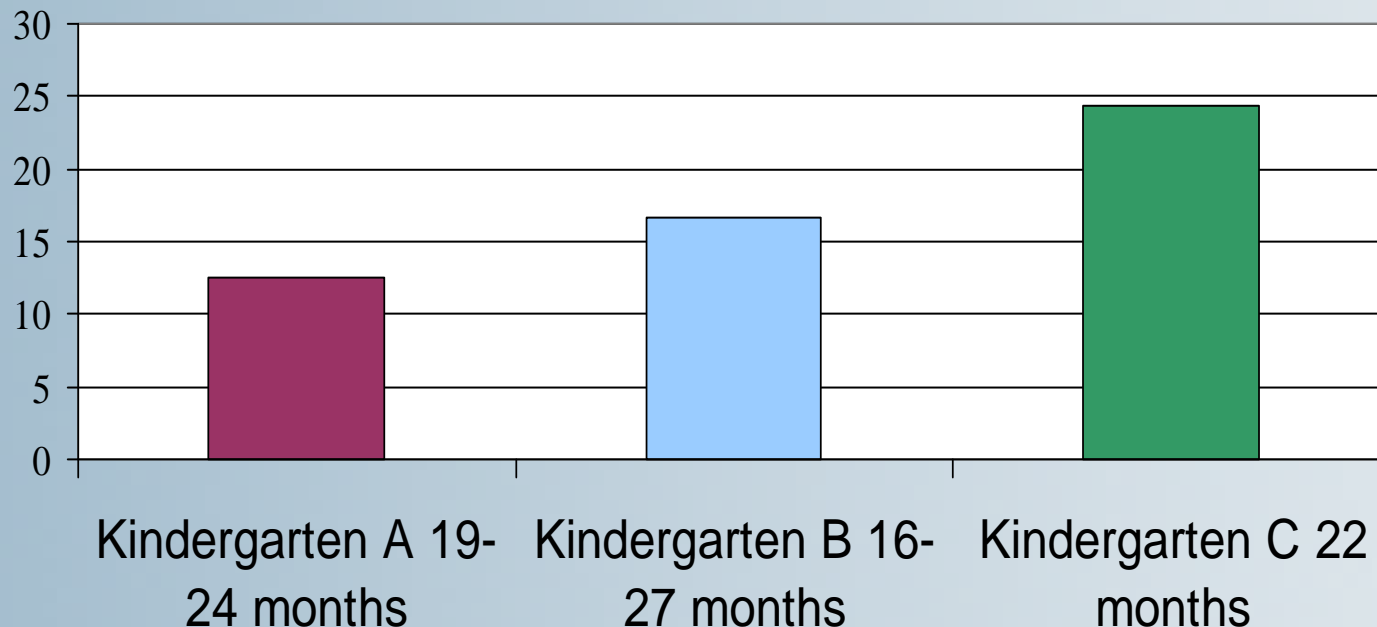
⇒ an increase of time of L2 exposure leads to an increase of lexical comprehension



# Bilingual Preschools: Results

## Lexicon

### Average Score Correct Items



- ⇒ different factors in the three preschools: contact time / day and teaching method
- ⇒ pedagogical setup seems to have an influence on the results



# Bilingual Preschools: Tests

## Grammar

### Online Picture Pointing Test (Steinlen 2008)

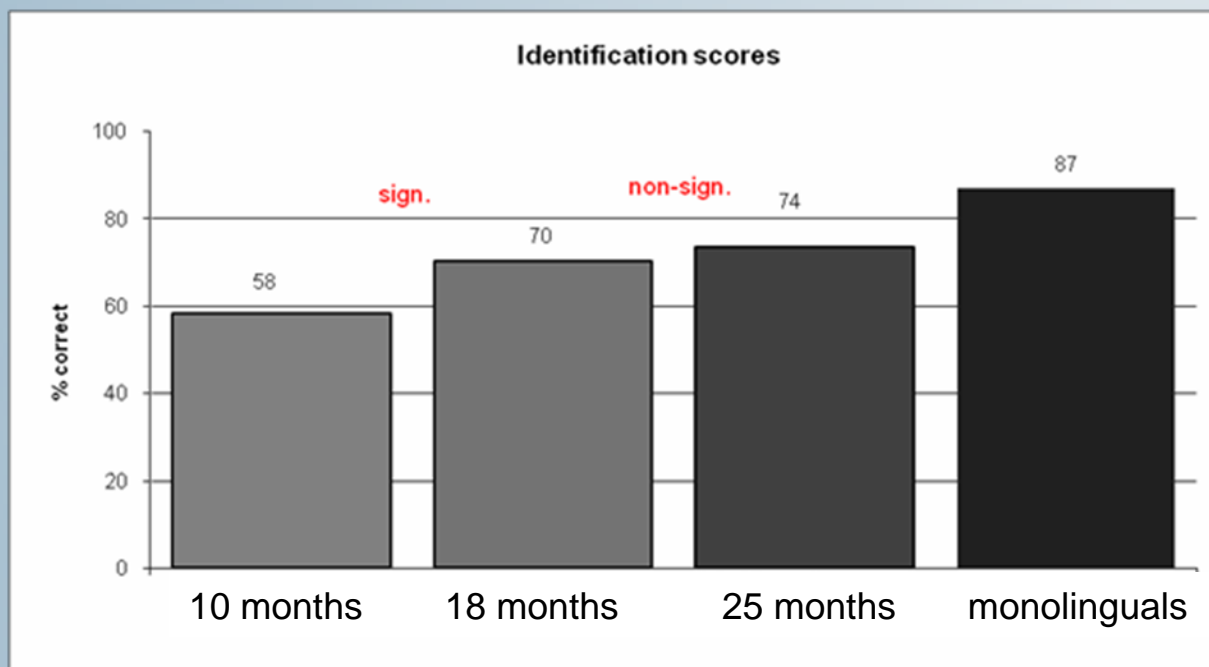
*The man kisses the woman.      The woman kisses the man.*





# Bilingual Preschools: Results

## Grammar (Steinlen 2008)



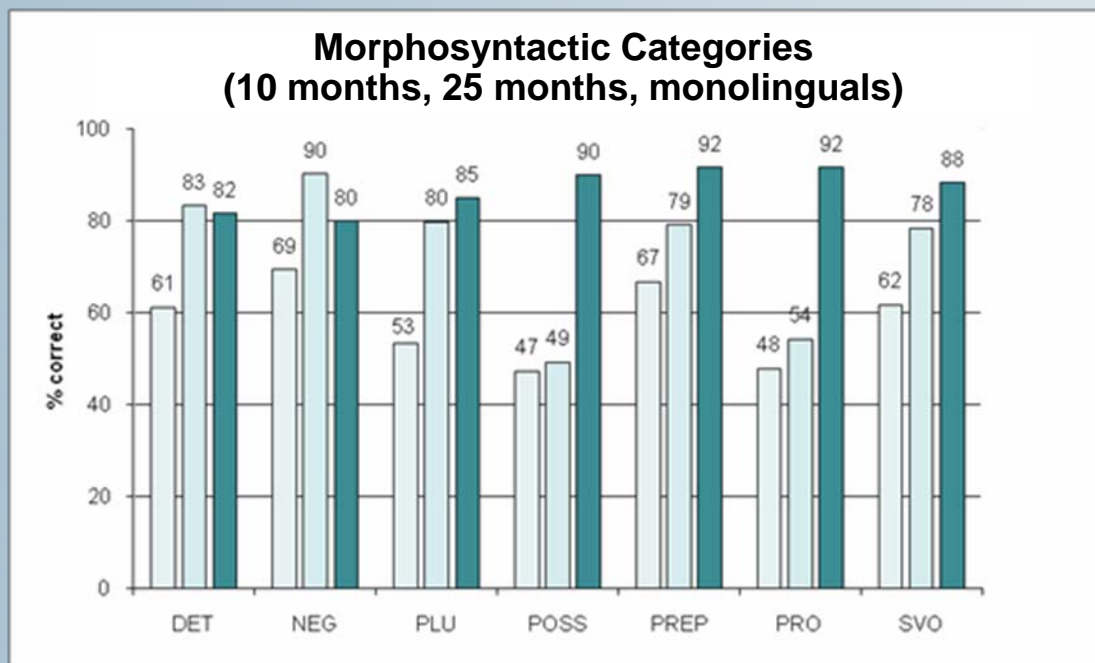
⇒ an increase of time of L2 exposure leads to a significant increase in identification of syntactic categories

⇒ monolingual comparison group does not reach full scores either



# Bilingual Preschools: Results

## Grammar (Steinlen 2008)



⇒ varying identification rates with different morphosyntactic categories

⇒ monolinguals do not exceed bilinguals in all categories



# Bilingual Preschools: Results

- children acquire lexicon and morpho-syntactic structures receptively in bilingual preschools
- an increase of L2 contact time leads to an increase of receptive knowledge of the L2
- time and intensity of the L2 input as well as immersion teaching principles seem to be defining factors for the rate of language acquisition



# Bilingual Preschools: Results

- ⇒ **bilingual preschools provide children with a strong basis of the L2 prior to the beginning of primary school**
- ⇒ **results need to be confirmed with a larger data corpus**
- ⇒ **factors influencing EFL in preschools need to be categorized and correlated with tests results**



# The EU-Project

**ELIAS** (Early Language & Intercultural Acquisition Studies)

## Project Goals

- Monitoring of bilingual preschools
- Enhancement of **second language learning, intercultural competence, and bilingual environmental education** for preschoolers
- scientific documentation
- evaluation of conceptual designs
- recommendations and dissemination





# The EU-Project

## Network

- 16 partners from 4 European Countries (Germany, Belgium, England, Sweden)
- Cooperation partners from Italy and the Netherlands
- 9 Universities
- Zoological Garden Magdeburg
- 7 bilingual preschools with English as second language, e.g. the Zoo-Preschool in Magdeburg

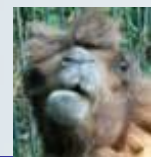
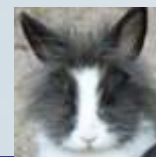
## Coordination

Prof. Dr. Holger Kersten, Kristin Kersten  
(Magdeburg University)





# The EU-Project



## Research



1. Bilingual Preschools

2. Cultural Studies

3. Linguistics

4. Speech Therapy

5. Science Education

6. Zoological Garden

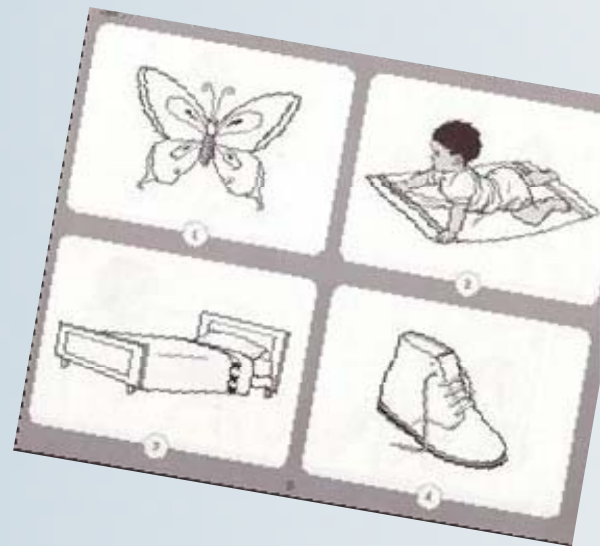




# The EU-Project

## Participant Observation (Spradley 1980)

- qualitative research methods
- observers take part in daily preschool routines
- ⇒ integrated in the preschool system
- avoiding "test situations"
- ⇒ emotional stability for the children
- field notes and questionnaires
- language assessment





# Bilingual Zoo-Education

*"Zoos and aquariums enable people to develop appreciation, wonder, respect, understanding, care and concern about nature."*

WAZA 2005: *Building a Future for Wildlife* – The World Zoo and Aquarium Conservation Strategy (WZACS); Chapter 5: Education and Training



# Bilingual Zoo-Education





# Bilingual Zoo-Education



## Education and Training

- education as a central role for all zoos and aquariums
- develop strategic plan for education and environmental sustainability (a "*green*" ethos), incorporating conservation issues
- collaboration with a variety of educational institutions, universities and teacher training institutes to link educational programmes to curricula developments
- lifelong learning: students from pre-school to university
- evidence to evaluate impact and effectiveness of education programs





# "Green Immersion"

## Combining the factors

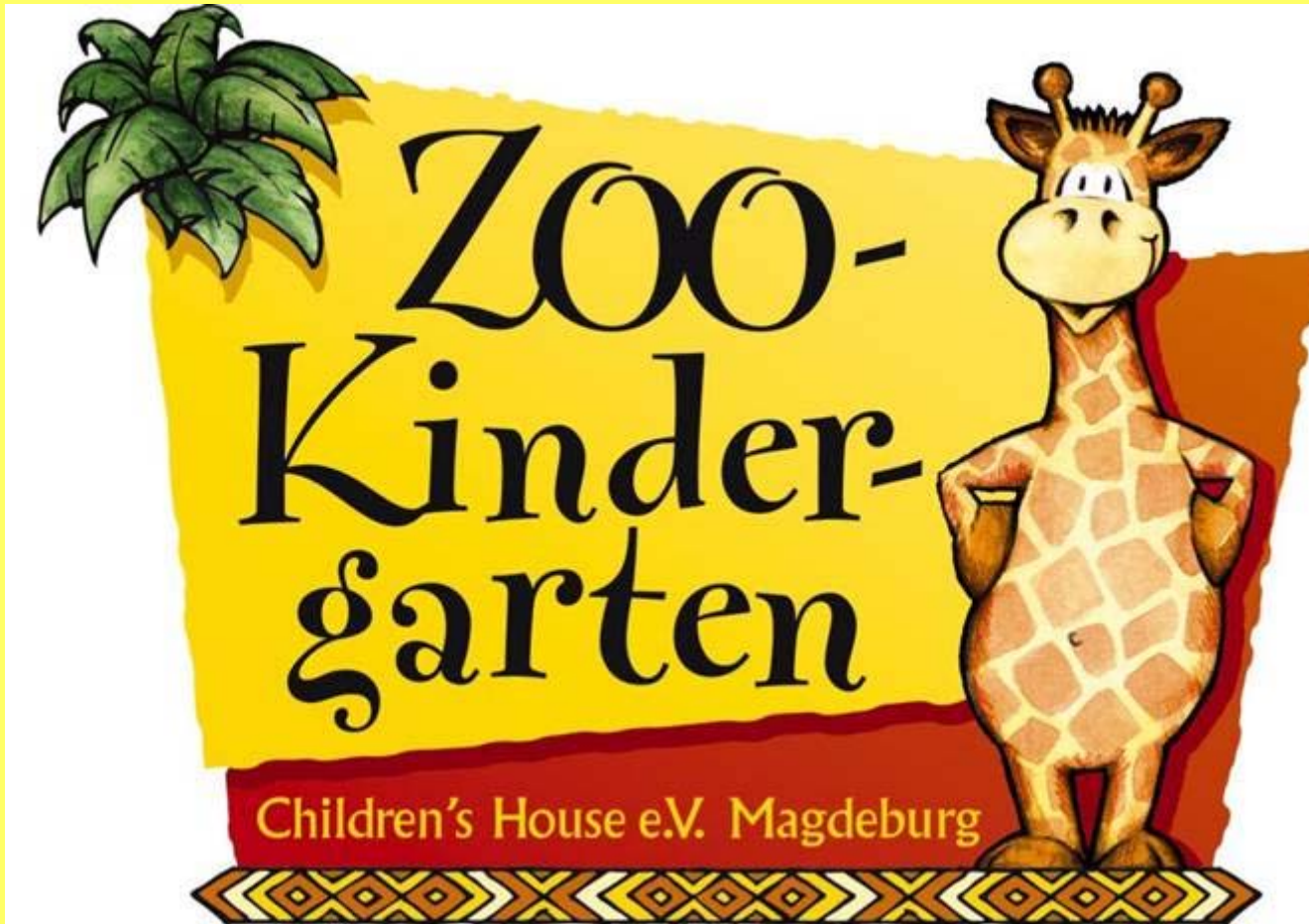
### "Green Immersion":

⇒ *immersion language education based on nature-related ("green") topics*

- zoo education
- environmental education
- conservation



# Zoo-Preschool Magdeburg



**"The early bird  
gets the  
worm!"**

[www.childrenshouse.de](http://www.childrenshouse.de)





# Zoo-Preschool Magdeburg

## Zoo-Preschool *Children's House*

- located on the grounds of Magdeburg Zoological Garden
  - two bilingual groups, age 3-6
  - German & English-speaking educators (USA, Malaysia)
- ⇒ trained teacher & zoo educator from the USA

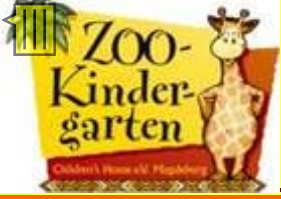
## Zoo Education

- ⇒ trained biologist and immersion teacher from Canada



# The Magdeburg Team

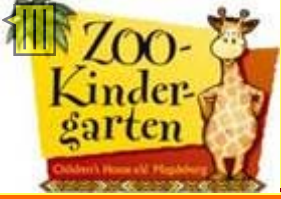




# Conceptual Design



*A visit to a zoo is an experience that touches a child's heart and mind. Children of preschool and primary-school age are mainly interested in objects and events that stimulate immediate affective and sensory responses. In addition to their fascination with an animal's visual appearance, its size, and its behavior, children tremendously enjoy direct interaction with the creatures from the animal world. ...*



# Conceptual Design



*... Touching them, feeding them, listening to their distinctive sounds, and taking in their characteristic smells – these are all experiences that leave a profound impact on a child's mind. They learn what it means to respect, to care for, and to be responsible for other living beings, and they begin to understand that there is a close connection between their actions and the consequences they lead to. (Isensee 2007)*



# Conceptual Design

## Project work & Conceptual Design

- daily learning sessions on zoo-related themes & nature topics for the preschool children in preschool and zoo
- teaching materials for bilingual sessions
- online version of the teaching materials for website and CD ROM
- conceptual design for the cooperation between preschools and non-academic institutions such as zoological gardens, aquariums etc.
- research study (participant observation) on children's progress in environmental learning



nutcracker



Animals Use Tools Too!

rock



Children's  
Tools



# Tools

Chimpanzee's  
Tools



fork



straw

spoon

hands



stick



feet

(From: Akerman, S., Thomas, S. (2008). "Bilingual Zoo Education." Poster presented at conference *Qualität im Fremdsprachen-Frühbeginn*. Nov. 27)



# Bilingual Zoo-Education

## Day 1: **Animals Use Tools Too!**

(adapted from Akerman & Thomas 2008)

### Objective:

- to increase the children's English vocabulary, specifically with words they use daily
- to demonstrate that, like children, chimpanzees use tools in their daily routines.

### Word Bank:

- Spoon, fork, straw, nutcracker, stick, hands, feet, rock, use, tools, chimpanzee, children, eat.

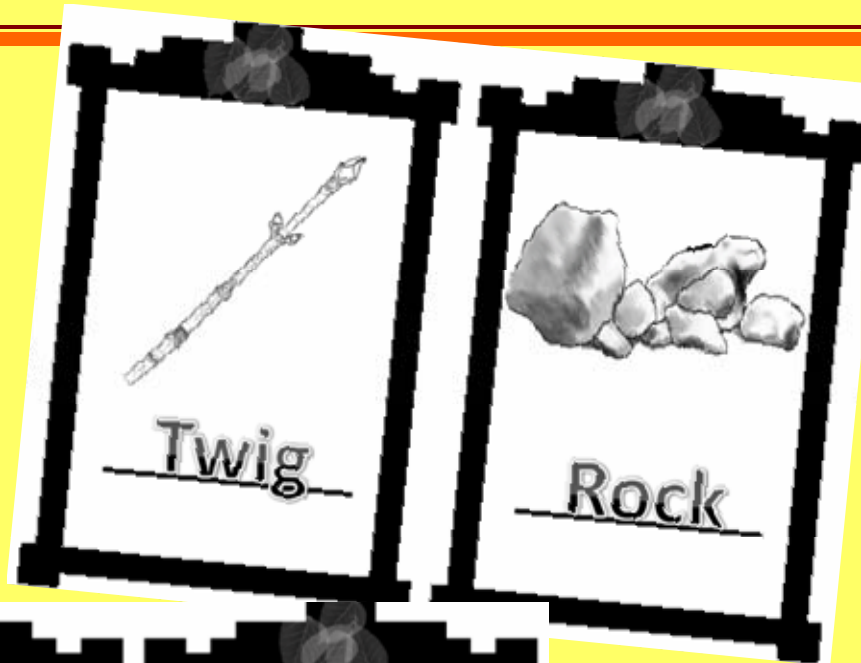
### Day 1: Introduction of Tools

- using the flash cards / the real thing, introduce each new tool from the list above to the children
- ⇒ child's tool to child column & chimp's tool to chimp column.
- videos / photos of chimpanzees using their "tools" to eat



# Bilingual Zoo-Education

## Flash Cards





# Bilingual Zoo-Education





# Bilingual Zoo-Education

## Day 3: Enrichment Activities

- prepare enrichment containers before hand.
- ⇒ plastic containers like butter tubs, cut holes in the top; fill the containers halfway with small pieces of crumpled paper; glue the containers shut so the children can't open them
- compare and contrast the food children and chimpanzees eat
- hand out an enrichment container to each child; have each child fill their container with their choice of snacks: raisins, dried fruit, nuts, and gummi candy work well
- once all the children are finished filling their containers, ask them to retrieve their snacks using their "tools"
- ⇒ if the children are having trouble, encourage them to shake the containers and use their fingers
- ⇒ the children can eat their snack once they have retrieved it

# Bilingual Zoo-Education



# Conceptual Design

*Enthusiastic as they are, children want to share these powerful experiences by telling stories of them to parents, relatives and peers, and thus practice*



*and develop their cognitive and communicative skills.*

(Isensee 2007)



# Conceptual Design

## *Green immersion competencies*

### **A. General competencies**

- respect for oneself, for other beings, and for nature
- positive self-identification
- social and emotional competence
- creativity
- communicative competence in two languages
- motor skills



# Conceptual Design

## *Green immersion competencies*

### **B. Specific competencies**

- environmental awareness
- science skills
- second language skills
- intercultural awareness



# Implications

- a close cooperation between educational institutions and zoological gardens, aquariums, etc. valuable for implementation of *green immersion*
  - close local proximity facilitates contact and exchange between both institutions
  - quality management in collaboration with researchers from different disciplines
- ⇒ ***Green immersion* represents a viable and promising way to meet the requests of both EU language and environmental education policies**





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*Thank you for  
your  
attention!*

# Kindergarten



Children's House e.V. Magdeburg

[www.elias.bilikita.org](http://www.elias.bilikita.org)



[www.elias.bilikita.org](http://www.elias.bilikita.org)



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