

"The Early Bird Gets the Worm"

Bilingual Zoo-Education for Preschoolers

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Background

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



Background: WZACS

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



Background: EU

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

*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.***

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



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

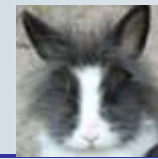
Coordination

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(Magdeburg University)





The EU-Project



Research



1. Bilingual Preschools

2. Cultural Studies

3. Linguistics

4. Speech Therapy

5. Science Education

6. Zoological Garden

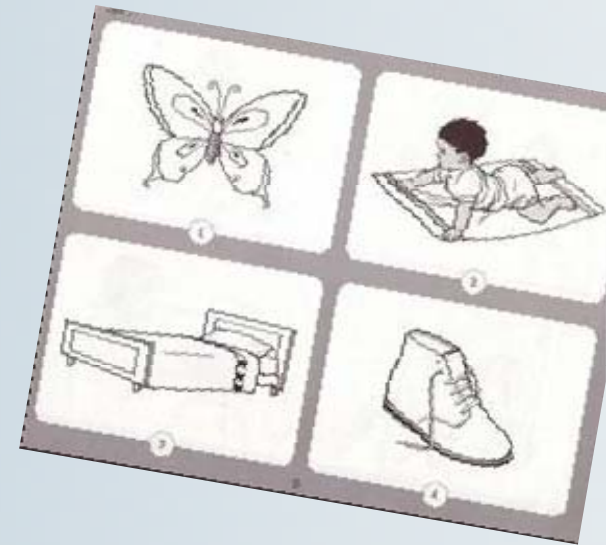




The EU-Project

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 Education

Immersion method (Genesee 1987, Wode 1995, Zydati 2000)

to be "immersed" in the second language (L2)

- the second language as medium of communication, not as focus of grammatical learning
- ⇒ **all content matter is taught in the second language**
- in bilingual preschools: all daily routines and activities
- in immersion schools: as classroom language
- ⇒ more than 50% of the school subjects are taught in L2



Bilingual Education



Immersion teaching (Lorenz & Met 1989)

Comprehensible input

"Understanding occurs when input ... is comprehensible, and input becomes comprehensible when it is supported by concrete experiences, visuals, realia, and nonverbal communication that assist in conveying meaning." (p. 37)

Contextualization of content

- ⇒ body language, gestures, facial expressions
- ⇒ pictures / visual aids, concrete materials, realia
- ⇒ repetitions, paraphrases, intonation, extensions ("caretaker speech / motherese")



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 Education



Transcript 1: Child 08.1B (Grade 1)

8 There is a dog and a boy, and the d/ dog looking in a glass, and in the glass sitting a frog, and the moon shining. And then the boy are sleeping, and the dog sleeping. And then the boy looking in the glass, and the frog is/ is not there.



Bilingual Education

Transcript 3: Child 08.3B (Grade 3)

Ehm one night a little boy ehm has caught a little frog and put him in a glass and ehm then he took the glass and bring it in his bedroom, and then he looks at the little frog, and the frog thinks, when the little boy sleeps I go out in the forest to my family. And ehm the light is on, and the little dog ehm looks in the glass exactly on the frog. And when the frog ehm go out of the glass in the night, the little dog and the little boy are sleeping, and ehm the moon is shining in the window, and ehm all is standing around and is dark. And when the day comes and the ehm sun shines on the glass and the little boy ehm wakes up and the dog a/ as well, ehm the glass was empty because the frog ehm in the night go ehm to his family again, in the forest.



Bilingual Preschools

- *one person – one language* principle (Döpke 1992)
- ⇒ native speakers of English as caregivers



Experiences from bilingual preschools

- the children are enthusiastic and very proud of their second language skills
- within a few weeks they understand the daily routines in English
- comprehension of the second language precedes production



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 Dachs!*

[That's not a badger!]

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





"Green Immersion"

Combining the factors

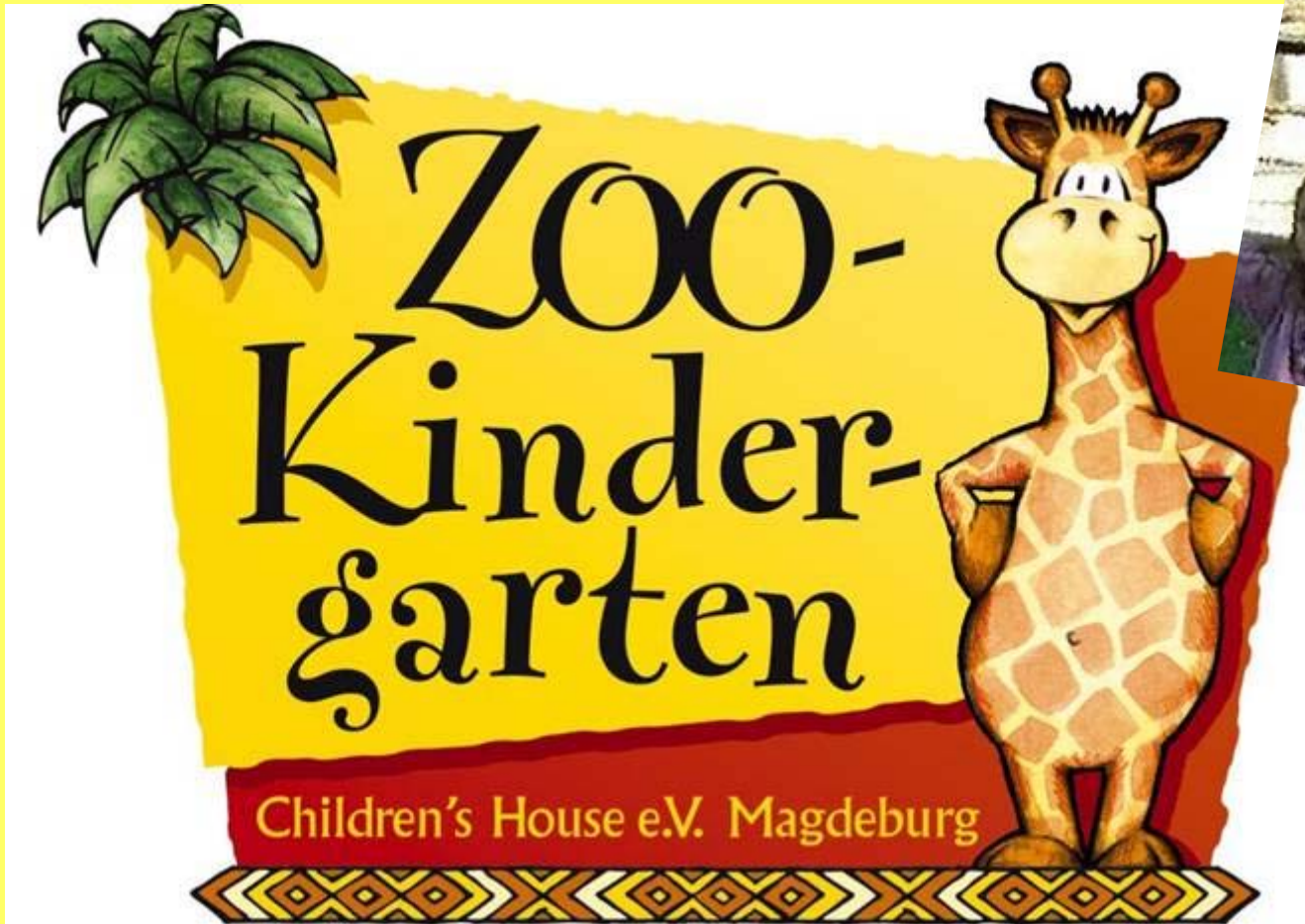
"Green Immersion":

⇒ *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



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





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



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)

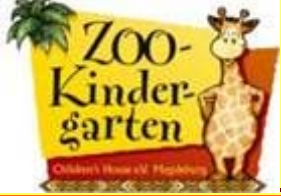


Conceptual Design

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

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



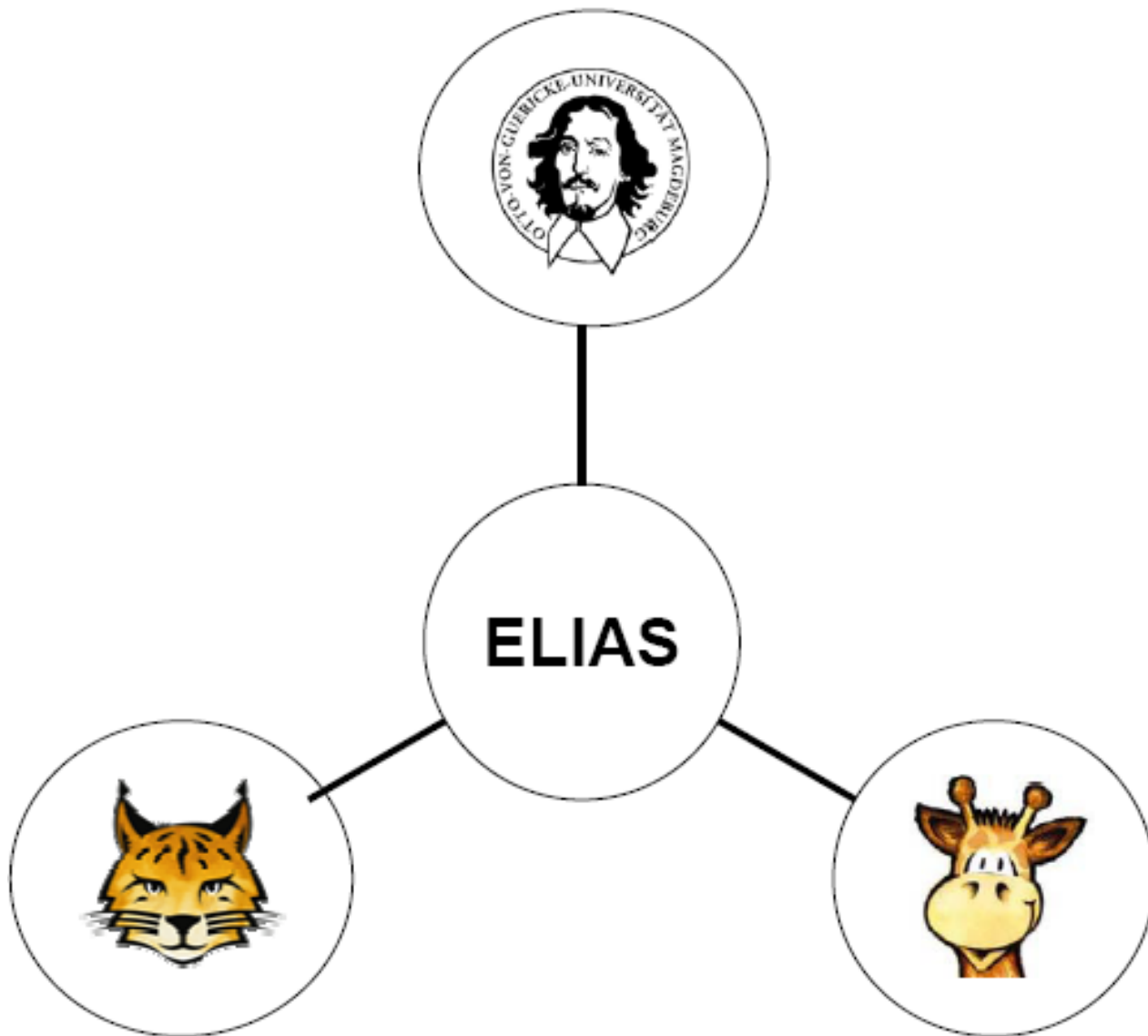


***Thank you
for your
attention!***

Kindergarten

Children's House e.V. Magdeburg





*www.elias.bilikita.org
www.zoo-magdeburg.de
www.childrenshouse.de*



www.elias.bilikita.org



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Background

Bilingual education / Immersion teaching (e.g. Wode 1995)

- most effective method of teaching foreign languages
 - content-based
- ⇒ integrating contents such as science & nature topics with foreign language teaching

Early start

⇒ **3+ formula** (Wode 2001)

1. bilingual / immersion preschools
2. bilingual / immersion primary schools
3. bilingual education in high schools



Background: EU

Proficiency in Three Community Languages (European Commission)

Proficiency in several Community languages has become a precondition if citizens of the European Union are to benefit from the occupational and personal opportunities open to them in the border-free Single Market. ...

Proficiency in languages helps to build up the feeling of being European with all its cultural wealth and diversity and of understanding between the citizens of Europe.

European Commission (1995): *White Paper on Education and Training.*