



HNE
Eberswalde

Hochschule für nachhaltige Entwicklung

Unser Name ist Programm

**Biodiversity and Health in the Face of Climate Change –
Challenges, Opportunities and Evidence Gaps**

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Nature experience areas providing biodiversity and children's quality of life – compatible or contradictory aims?

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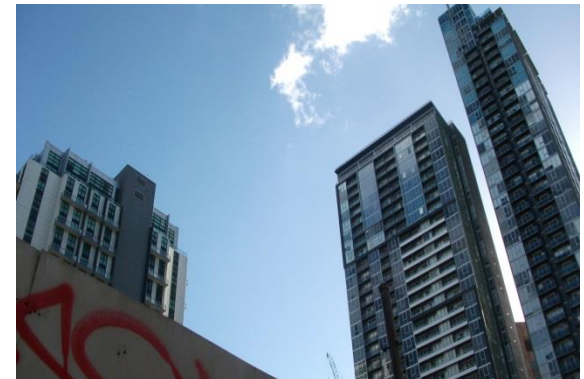
The situation: modern childhood



- Limited radius for autonomous activity (Kyttä et al., 2015; Blinkert, 2016)
- Institutionalisation of childhood (Bamler et al., 2010)
- Media consumption
- Nature alination? (Mitscherlich, 1965; Brämer, 1998, 2010)

The meaning of nature in childhood

- Concentration (Taylor & Kuo, 2009)
- Self competence (O'Brien & Murray, 2005)
- Social competencies (Dymont, 2005)
- Lower psychological pressure (Wells & Evans, 2003)
- Resistance to illness, motoric skills & body weight (Jung et al., 2012)

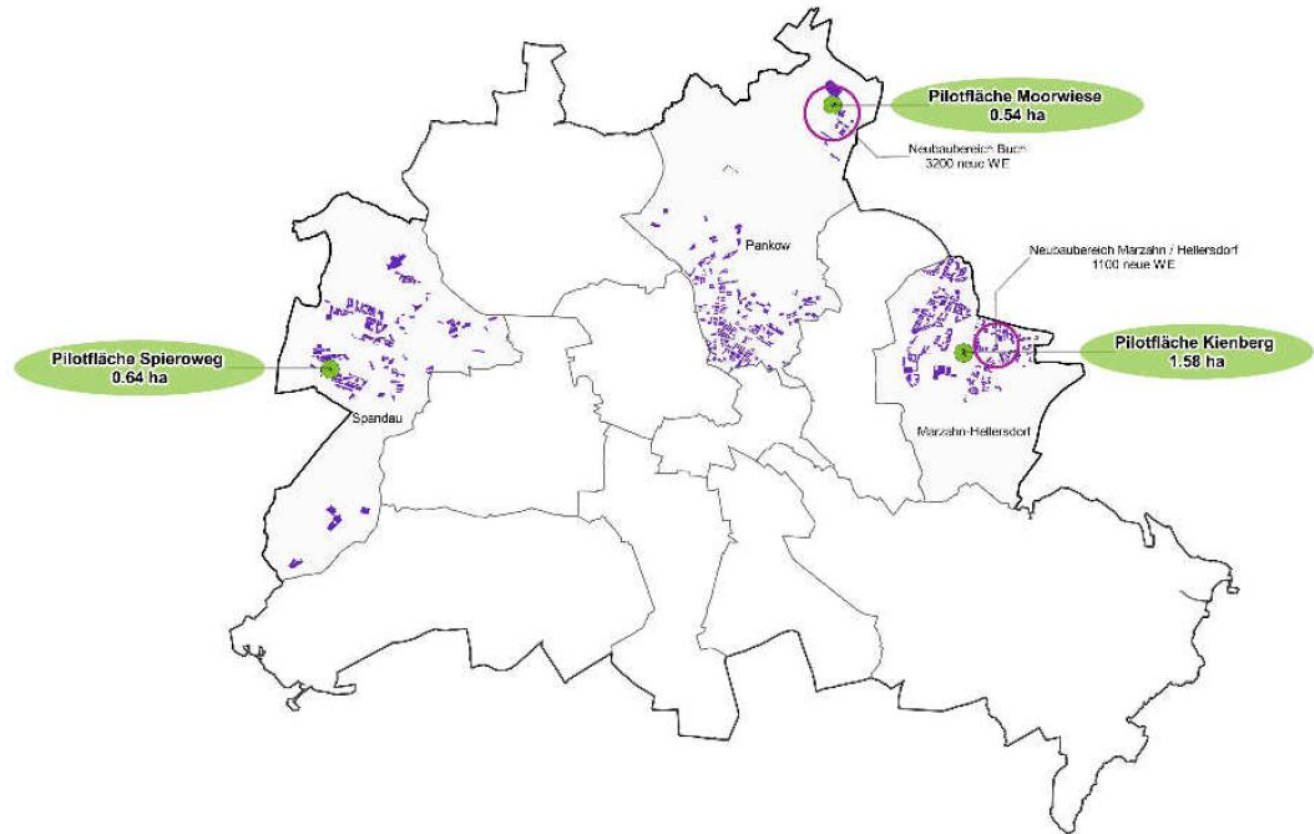


Nature Experience Areas in an urban context

Use	Recovery
Character	Large partial areas, preferable > 50 % unkept, nature-oriented, rest extensively cultivated, natural attractivity, no play tools
Size	Minimum 0,5 hectares
Maintenance	Extensive care Definition of care plan with organizers and users
Location	Close to living environment (Access radius 500m)
Target group	. Age 6 to 12 years . Possibly younger (child care institutions)
Assistance	. Play actionoffers to get to know location . Enable unobserved, free play
Reglementation	. Considering safety issues
Planning protection	. Initiation in given space category, no additional protection. . Initiation of separate greenspace category possible

Characteristics of urban Natural Experience Areas (adapted to Stopka & Rank, 2013)

Pilot areas in Berlin



Quality of life

- Analysis of **use** and **play behaviour**
 - structured observation
- Acceptance of area by parents
- Media-supported interviews (children)

- Participation

Planning Quality

- Analysis of framework conditions in order to successfully create and maintain Nature Experience Areas

Ecological Quality

- Analysis of the development of ecological values during the use of children
 - Mapping of flora and fauna



Before child play, 2009



After child play ,2012

Research areas

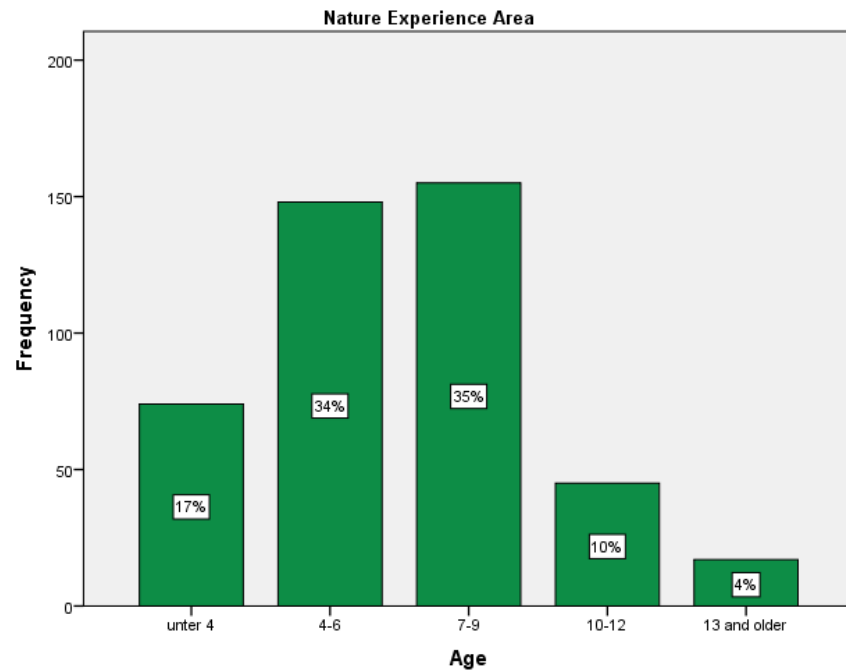


Complexity of play behaviour

Play	Examples	Complexity
<i>Psycho-motoric play</i>	<ul style="list-style-type: none"> - playing with sand - manipulating objects - playing in puddles 	Low
<i>Movement play</i>	<ul style="list-style-type: none"> - Running - Swinging - Jumping 	Low
<i>Games</i>	<ul style="list-style-type: none"> - Hide and seek - Tig - Double dutch 	Low to medium
<i>Construction play</i>	<ul style="list-style-type: none"> - Building huts - Handicraft, painting - Repairing things 	High
<i>Imagination and role play</i>	<ul style="list-style-type: none"> - Mum-dad-child - Cowboys and Indians 	High
<i>Exploration</i>	<ul style="list-style-type: none"> - Analyzing objects - Watching animals - Experimenting 	High
<i>Communication play</i>	<ul style="list-style-type: none"> - Watching - Listening - Talking - Making music 	

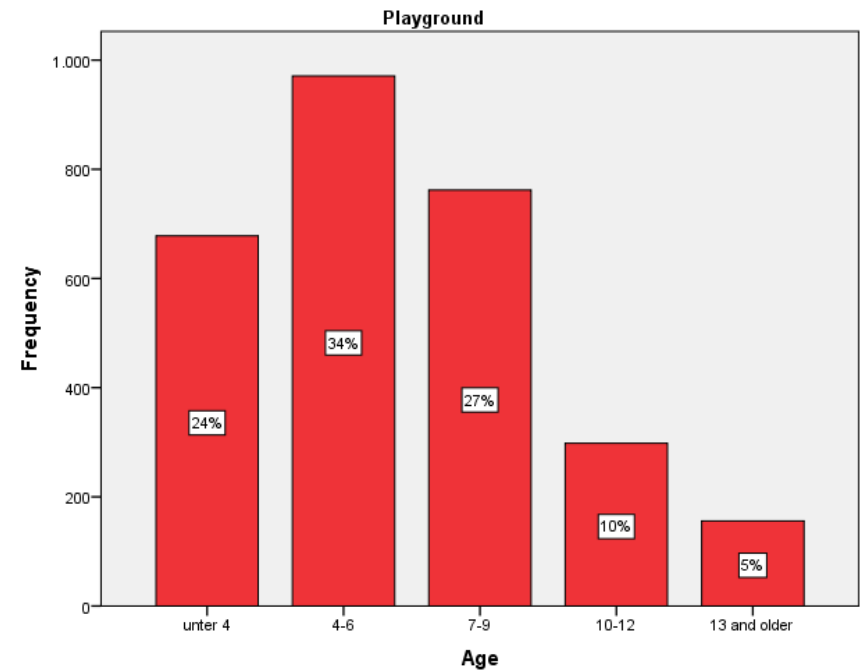
Adapted to Hegemann-Fonger, 1994; Oerter & Montada, 1998; Bauer, 2001

Age groups playground and Nature Experience Area



Frequencies of children present on Nature Experience Area (N = 439)

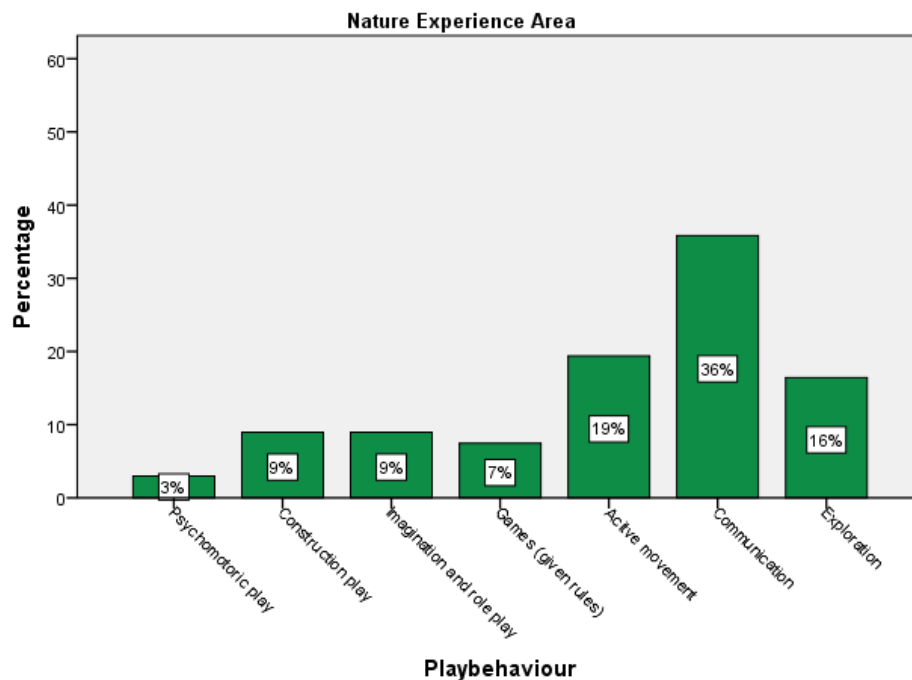
Cases toys involved in play action: 12,1 %



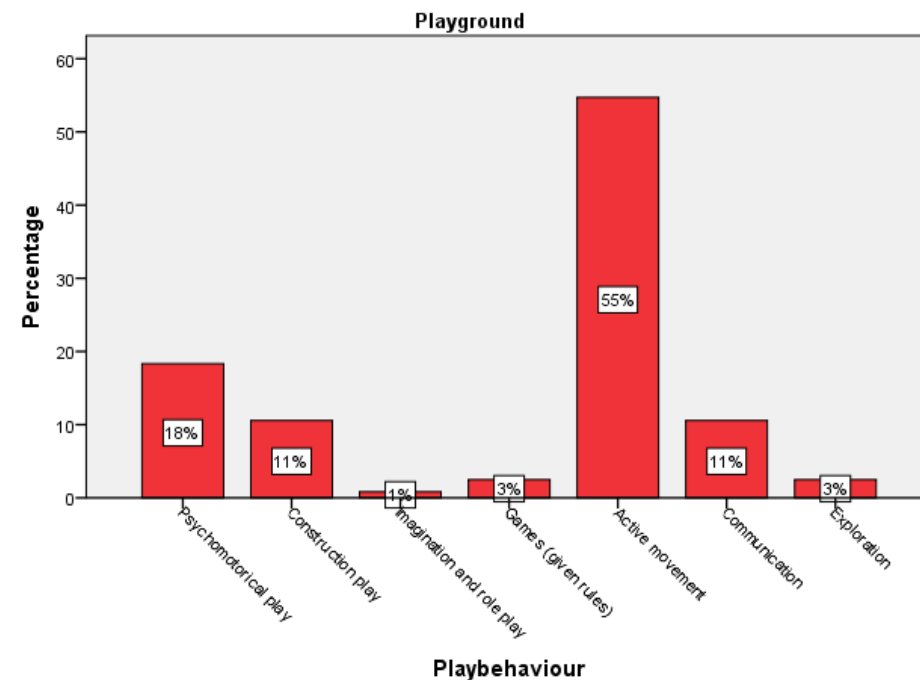
Frequencies of children present playground (N = 2865)

Cases toys involved in play action: 27,3 %

Play behaviour playground and Nature Experience Area



Different play behaviour in Nature Experience Area
(N = 67)

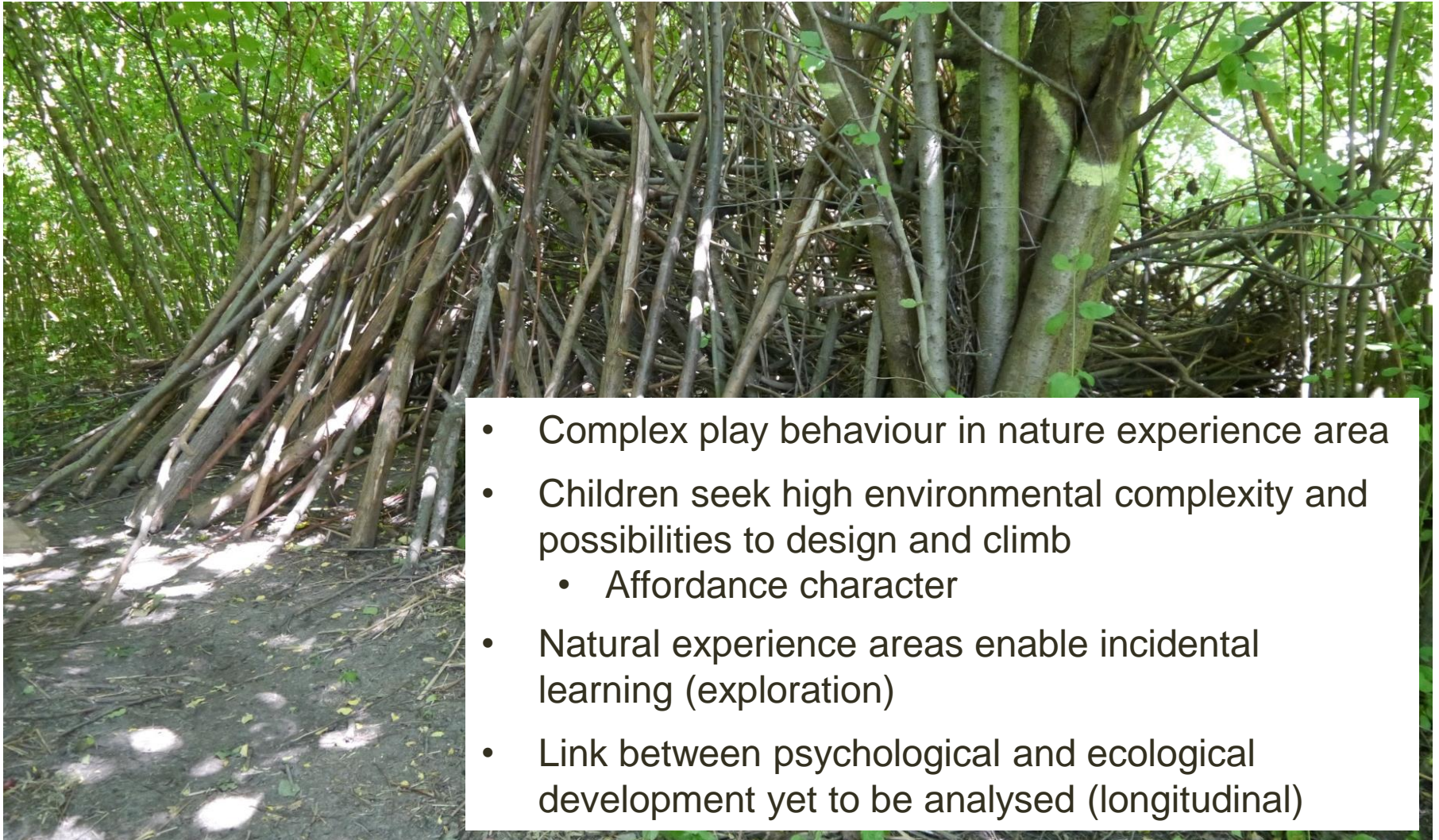


Frequencies of children present on playground
(N = 360)

Activities and favourite places



Head category	Category
Nature as location for play and adventure	Possibility to play
	Possibility to climb
	Possibility to create
Nature as location of discovery	Possibility to observe
	Outlook/ view
Nature as retreat location	Possibility to hide/ shelter
	Aesthetics
	Quietness
Nature as pleasure location	Possibility for nutrition
Nature as no-go-area (Un-Ort)	Darkness
	Derangement
	Deprivation of stimulation
Nature as threatening location	Painful experiences



- Complex play behaviour in nature experience area
- Children seek high environmental complexity and possibilities to design and climb
 - Affordance character
- Natural experience areas enable incidental learning (exploration)
- Link between psychological and ecological development yet to be analysed (longitudinal)

Thank you!

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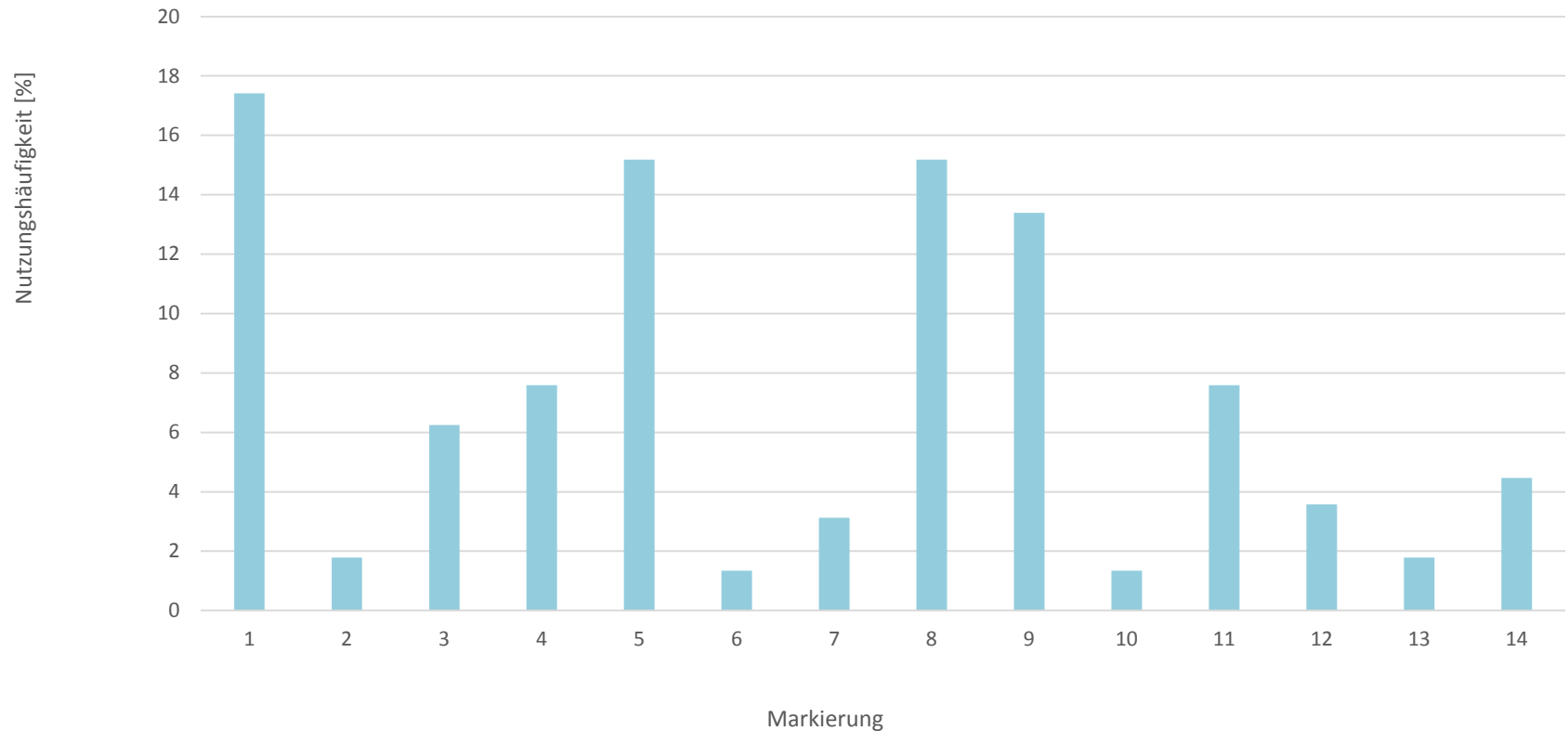
<http://www.hnee.de/naturerfahrungsraeume-in-grossstaedten-am-beispiel-berlinwissenschaftliche-begleitung-k5621.htm>

Special thanks for the support of:

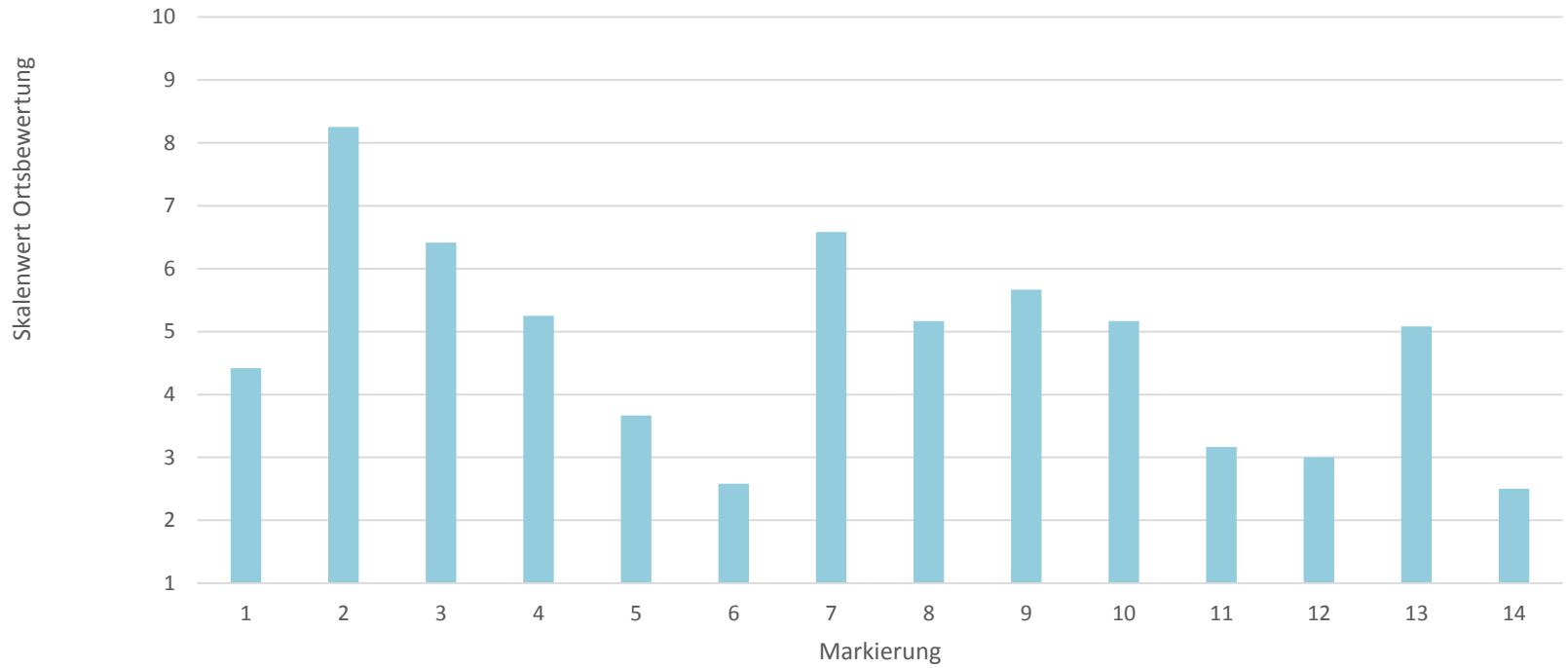


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User frequencies of detailed locations on Nature Experience Area Berlin Spandau (N = 224 children aged 4 to 12)



Komplexität der Spielorte



- Nature Experience Area far less frequently used than conventional playground
- Lower number of young children (4-6) in Nature Experience Area
- Play behaviour is more complex in Nature Experience Area

- Favourite places often with high environmental complexity
- Most important activities in Nature Experience Area
 - Climbing
 - Creating, building

- Interlinkage between psychological and ecological development yet to be analysed (longitudinal)

Structure of the talk

- The situation: modern childhood
- The meaning of nature in childhood
- Nature Experience Areas in an urban context
- The interdisciplinary research approach
- Some results
- Discussion