1 Introduction				
2 CONTEXT-ORIENTED LEARNING				
	2.1	Problems of Traditional Instruction	3	
		2.1.1 The Issue of Scientific Literacy	3	
		2.1.2 Attitudes toward Science	4	
	2.2	The Role of Context in the Science Curriculum	7	
		2.2.1 First Approaches to Innovate the Curriculum	7	
		2.2.2 Context-based Approaches	8	
		2.2.3 Evaluation of Context-based Courses	12	
	2.3	What is a Context?	17	
	2.4	Investigating the Context Variable: Theories and Evidence	21	
		2.4.1 Interest	21	
		2.4.2 Knowledge Domains and Knowledge Application	28	
	2.5	Methods in Context – Building up Knowledge Structures	32	
		2.5.1 Concept Mapping as an Instructional Tool	32	
		2.5.2 Empirical Evidence on the Efficacy of Concept Mapping	35	
3	Ri	ESEARCH OBJECTIVES	39	
	3.1	Methodological Considerations	39	
	3.2	Research Questions and Hypotheses	41	
4	Di	esign & Sample	43	
	4.1	Design and Independent Variables	43	
	42	Sample	45	



5	L	RNING ENVIRONMENT	47
	5.1	nteraction Boxes	47
	5.2	Revision Mode	52
		5.2.1 Concept Mapping	52
		5.2.2 Written Summary	54
	5.3	Solution Cards	54
6	TF	T Instruments	55
	6.1	Control Measures	56
		6.1.1 Cognitive Ability	56
		6.1.2 Socio-economic Status	57
		6.1.3 Motivation and Individual Interest	59
		6.1.4 Topic-specific Prior Knowledge	63
	6.2	Dependent Variables	64
		6.2.1 Interest Measures	64
		6.2.2 Achievement Measures	68
	6.3	Additional Interest Measures	74
		6.3.1 Topic-specific Interest in Intervention-related Topics and Substances	74
	6.4	Video Analysis	77

		7.3.3	Discussion: Concept Mapping	118
		7.3.2	Quality of Concept Maps	117
		7.3.1	Achievement	116
	7.3	-	Mapping vs. Written Summary	116
			Discussion: Context and Video Analysis	115
			Contextual Embeddedness	114
			Linkage	113
		7.2.4	Video Analysis	112
			Discussion: Interest and Cognitive Outcome	111
		7.2.3	Interest and Cognitive Outcome	110
			Discussion: Context and Achievement	108
			Context and Gender	107
			Specific Contexts and Achievement	105
			Cognitive and Knowledge Prerequisites	105
			Connected Knowledge	104
			Knowledge Application	103
			Knowledge Recall	102
		7.2.2	Achievement	102
			Discussion: Context and Interest	101
			Situational Interest and Individual Interest Development	100
			Situational Interest Development	97
			Situational Interest	95
			Individual Interest Development	93
		7.2.1	Interest	93
	7.2	Context		93
			Result of Treatment Balancing	90
			Balancing Treatment Groups	88
		7.1.2	Treatment Constitution	88
		7.1.1	Sample Constitution and Attrition	85
	7.1	Descript	tives	85
7	Ri	ESULTS A	AND DISCUSSION	85
7	D٠	COLUMN A	ND DIRECTION	(

9 REFERENCES	124
10 Table of Figures	141
11 INDEX OF TABLES	143
12 APPENDIX	145