Contents

List of Figures			vi	
	List of Tables			
Intr	oduction		1	
1	The co	ntext to the research	3	
2	Metho	dologies, concepts and framing perspectives	11	
3		research perspectives	21	
4	Resear	ch into patterns of computer use: Surveys, 1994-1999	31	
5	What t	eachers think about ICT	69	
6	Multi-1	tasking cyborgs: Implications	85	
7		ots of Mind: A developmental picture	96	
8		ts' Minds	107	
9	Towar	ds a new theory of Mind	119	
10		an't teachers do IT? Cognitive dissonance	129	
11		tonomous learner?	134	
12		dology: Reflections	143	
13	Conclu		147	
14		al epilogue	153	
Арр	endix 1	Coursework and marks: A student perspective	155	
Appendix 2		What is the Mind? How does it work?	158	
Appendix 3 How do you learn? Some student comments		169		
	Bibliography			
	Index			

List of Figures

4.1	Home ownership of Personal Computes, 1995-96	37
4.2	Increase in ownership over one year	38
4.3	Ownership growth, 1995-99	42
4.4	Computer gratifications: diversion and pleasure	56
4.5	Personal reference: the development of computer skills	58
4.6	Reality exploration: the understanding of computer tasks	59
4.7	Personal identity: computer use and value reinforcement	60
4.8	Surveillance: information about the wider world	61
5.1	1996-67 Teachers and computers: ownership by type	70
5.2	Teachers' use of computer applications	75
5.3	Impact on students' work: teacher perceptions	76
5.4	Aspects of work improved by computers: teacher perceptions	76
8.1	The constructivist model of Mind	108
8.2	Mind as the site of emotion and feelings	109
8.3	Mind as the source of ethics	110
8.4	Mind as an individual's identity	111
8.5	Mind as synonymous with brain	112
8.6	Computational Models of Mind: responses by year	113
8.7	Mind as a computer	114

List of Tables

4.1

	1995	3,
4.2	Home ownership of Personal Computers (IBM compatible), 1995-96	3
4.3	Increase in ownership across student cohort	3
4.4	Home ownership of Personal Computers, 1997	4
4.5	Home ownership of Personal Computers (IBM compatible):	
	disparities	4
4.6	Ownership growth at Boston Spa Comprehensive School, 1995-99	4:
4.7	Cross-year comparisons	4
4.8	Gratifications: responses by type	4
4.9	Gratifications: a summary of findings	5
4.10	Diversion and pleasure	5
4.11	Personal relationships (integration)	5
4.12	Personal reference: the development of computer skills	5
4.13	Reality exploration: understanding how and why to undertake	
	tasks on the computer	5
4.14	Personal identity: value reinforcement	5
4.15	Surveillance	6
4.16	1995 survey	6
4.17	Computer use at school and home: teacher response, 1996	6
5.1	1996-97 Teachers and computers: overall ownership patterns	7
5.2	Impact of computers on student work	7
5.3	Aspects of student work improved by computer use	7
5.4	Percentage improvement	7
5.5	Age of students affected	7.
5.6	Negative effects	7
5.7	Benefits frequently cited	7
5.8	Staff computer use as part of the curriculum	7
5.9	Transactional factors	7
5.10	Impacts	7
5.11	Affective factors	7
5.12	Transactional factors	7
6.1	Learning with computers	8

Students with a computer at home: the uses to which it is put,

viii Virtual Learning

6.2	Changes in the cost of computer memory	89
7.1	Investigating concepts of Mind	99
7.2	What is the Mind?	101
8.1	The constructivist model	107
8.2	Mind as the site of emotion	108
8.3	Mind as the source of ethics	109
8.4	Mind as the focus of identity	110
8.5	The Materialist Model	111
8.6	Computational Models of Mind	113
8.7	Metaphysical concepts of the Mind	115