CONTENTS

PREFACE I

I MULTIMEDIA AND NEW TECHNOLOGIES: HISTORY AND DEFINITIONS 1

1 Introduction 1

2 Teaching: a short historical overview on teaching ideas 1

3 Multimedia and new technologies: history and definitions 4
3.1 History 4
3.2 Definitions 9
3.3. Definition as it will be used further on 11

II THE THEORY BEHIND THE SCREEN 13

1. Historical background: a short overview 13

2 Constructivism and cognitive science 16

3 Constructivism – applied to multimedia classes 19

4 Conclusion 23

5 DIGRESSION 26

III PERSPECTIVES OF USING NEW TECHNOLOGIES IN HIGHER EDUCATION 29

1 The Pros and Cons of teaching with multimedia applications 29
1.1 Contrary opinions on teaching with multimedia 30
1.2 Pro–arguments for teaching with multimedia 34
1.3 Concluding remarks 37

2 Media competence 38

3 What are the current advantages and disadvantages of multimedia teaching devices? 39

4 Media didactics – *Or the problem of applying multimedia to higher education* 42
4.1 New technologies and multimedia in dispute 42
4.2 'Humanities lack new technologies' – Examples of applied projects 44
4.3 Conclusion 45

IV A PRACTICAL EXAMPLE 51

1 The evaluation of the field study on the acceptance of multimedia-technology in higher education over a period of three semesters 52
1.1 The analysis of the acceptance of multimedia teaching devices in higher education 53

2 'The interactive introduction to linguistics' – A pilot project at the English department of the University of Marburg 1998/1999 57
2.1 TIITL – the application to the curriculum 57
2.2 TIITL – its application in class 58
2.3 The multimedia teaching contents of TIITL 60
2.4 The participants of the computer course 65
2.5 The parallel course: conventional teaching methods and its acceptance 70
2.6 The acceptance at the beginning and the end of the computer courses 72
2.7 Constantly asked questions in questionnaires #2 to #6 84

3 A comparison of the two teaching methods 89
3.1 Problems 89

4 Summary and conclusion 93
4.1 Summary 93
4.2 Conclusion 94

V IMPLICATIONS FOR THE STUDY OF ACCEPTANCE OF HIGHER EDUCATION WITH MULTIMEDIA 99

1 New technologies and multimedia in general 99

2 Other projects 101
2.1 German Projects 102
2.2 International Projects 106

3 Acceptance of multimedia in higher education in Germany 111
3.1 Germany 111
3.2 International comparisons 122
3.3 In general 134
3.4 Consequences for publishers 137

4 A vicious circle 139
4.1 Need for modern education in Germany 139
4.2 Consequences of multimedia for employment in the German economy 146

VI THE FUTURE: PROSPECTS AND CONCLUSION 151

1 Opinions, ideas and perspectives 151

2 Conclusion 160

BIBLIOGRAPHY 163

APPENDIX A – COURSE MATERIALS I

APPENDIX B – THE QUESTIONNAIRES XXIII