

**Surviving the game:
Interaction in an adult online learning community**

By

Linda van Ryneveld

Submitted in partial fulfilment of the requirements for the
degree

Philosophiae Doctor

In the

Department of Teaching and Training Studies
Faculty of Education

of the

University of Pretoria

Supervisor: Prof Johannes C Cronjé

Co-Supervisor: Prof I Eloff

October 2004

Table of Contents

Table of Contents.....	i
Summary and Keywords.....	v
Acknowledgements and Gratitude.....	vii
List of Tables and Figures.....	viii
<hr/>	
Chapter 1	
Introduction.....	1
Rationale for the Study.....	2
Motivation for the Study.....	3
Play and Games.....	4
Adult Learners.....	6
World Wide Web as a Learning Environment.....	6
Group functioning, Interaction and Dynamics.....	7
Purpose of the Study.....	8
Games.....	8
Adult Learners.....	9
A Web-based Course.....	9
Problem Identification and Research Questions.....	10
Context	12
International Context.....	12
National Context.....	13
Local Higher Education Context.....	15
Scope.....	16
Research Design.....	18
Roles.....	21
Limitations of the Study.....	22
Ethical Considerations.....	25
Terminology.....	27
Outline of Chapters.....	28
Chapter 2	
Introduction.....	30
The Element of Play in Learning.....	30
The Play Attribute.....	32
Play and Flow.....	36
Games as Educational Tools.....	38
Adult Learners.....	41
Motivating Adults to Learn.....	48
Maslow's Hierarchy of Needs.....	49
Physiological Needs.....	50
Safety	50
Needs.....	
Love and Belongingness Needs.....	50
Ego Needs.....	51
Self-actualisation Needs.....	51
Malone & Lepper's Taxonomy of Intrinsic Motivations for Learning.....	52
Challenge.....	52
Curiosity.....	53

Control.....	53
Fantasy.....	53
Keller's ARCS Model.....	54
Attention.....	54
Relevance.....	54
Confidence.....	55
Satisfaction.....	55
Group Formation.....	56
Small Group Development.....	57
Group Size.....	58
Purpose or Common Goal.....	59
Sense of Belonging (Membership).....	60
Single Place or Face-to-Face Interaction.....	60
Behaviour.....	61
Resources.....	62
Roles.....	62
Types of Groups.....	63
Group Process.....	64
Communication.....	64
Time Factor.....	65
Conflict.....	65
Context.....	65
Competition.....	66
Personal Differences.....	66
The Importance of Interaction.....	67
Interaction.....	70
Learner-learner Interaction.....	72
Learner-content Interaction.....	75
Learner-instructor Interaction.....	77
Learner-interface Interaction.....	79
Learner-environment Interaction.....	80
Conceptual Framework.....	80
Closure.....	83
Chapter 3	
Introduction.....	85
Paradigm for the Study.....	87
Interpretivism.....	89
Design Experiments.....	91
Design Model: the ADDIE Instructional Design Model.....	97
Needs Analysis.....	97
Design of the Module.....	101
Development of the Module.....	102
Implementation of the Module.....	103
Evaluation of the Module.....	103
Tapping into Ethnography.....	104
Research Design: Case Study.....	107
Data/Material Collection.....	113
Mode of Analysis.....	116
Quality Criteria.....	119
Crystallisation and Triangulation.....	122
Closure.....	124

Chapter 4

Introduction.....	126
The case study: CyberSurviver.....	126
Closure.....	135

Chapter 5

Introduction.....	136
Prelude.....	136
Summaries of Weeks 1 – 6.....	137
Week 1: 18 – 25 July 2002.....	137
Week 2: 25 July – 1 August 2002.....	146
Week 3: 1 – 8 August 2002.....	155
Week 4: 8 –15 August 2002.....	163
Week 5: 15 – 22 August 2002.....	169
Week 6: 22 August – 2 September 2002.....	174
Closure.....	181

Chapter 6

Introduction.....	183
The <i>CyberSurviver</i> Game.....	184
Group Composition.....	186
Active Participation and Availability.....	189
Personal Preferences.....	189
Shuffling the Tribes.....	190
The Survey Response.....	196
Isolation.....	197
Tribal Assignments.....	206
Individual Assignments.....	216
Immunity and Reward Challenges.....	221
Voting.....	230
The Jury.....	234
Tribal Councils.....	235
Grand Prize.....	236
Closure.....	238

Chapter 7

Introduction.....	239
Learning Outcomes and Expectations.....	240
Peer Support.....	243
Feedback.....	253
Peer Assessment.....	259
Interpersonal Conflict.....	266
Language.....	271
Stress Factors.....	278
Time Issues.....	281
Competition Factor.....	286
Humour.....	289
Sharing Personal Information.....	294
Synchronous and Asynchronous Communication.....	296
Cost Implications.....	300

Online Culture.....	304
Retention Rate.....	306
Conclusion.....	309
Closure.....	311
Chapter 8	
Introduction.....	312
Summary.....	312
Discussion.....	314
Methodological Reflection.....	314
Substantive Reflection.....	317
Study-specific Reflection.....	328
Sub-question 1.....	328
Sub-question 2.....	328
Sub-question 3.....	329
Sub-question 4.....	331
Recommendations.....	334
Recommendations for Practice.....	334
Pre-requisites.....	335
Contact Sessions.....	335
Group Formation.....	335
Technology.....	337
Facilitation.....	337
Design Issues.....	339
Support and Scaffolding.....	340
Expectations.....	341
Recommendations for Further Research.....	341
Closure.....	343
References.....	346

Summary and Keywords

Summary

In many Higher Education institutions, fun or enjoyment represents purposelessness, and is often characterised as something that should only be indulged in at specific times, in measured ways, and on special occasions. Play and games are thus often assigned a role that is secondary to 'real' work. This essentially artificial separation between work and play has had a profound effect on traditional learning theories and educational design.

The purpose of this study is to investigate the role of the metaphor of a game in the interaction, dynamics and complexities of a web-based module that is presented to adult learners. The uniqueness of this study is attributable to a combination of the following elements:

- games and play, and their motivational potential and value for adults
- adult learners, group complexities and dynamics, and the various kinds of online interactions to which learners are subjected
- the World Wide Web as a learning environment.

The case study upon which this thesis is based is the facilitation of a particular module that is presented as part of a two-year tutored Masters degree in Computer Integrated Education at the University of Pretoria. The presentation of the module simulated the spirit and atmosphere of *Survivor*® – an award-winning reality series that has been shown on national television.

This study aimed to throw light on the impact of the metaphor of the game on the complexities of adult learning in a web-based module. In order to do this, the following elements of the game were investigated: Group Composition, Isolation (on the virtual island), Tribal Activities, Individual Activities, Reward Challenges, Immunity Challenges, Tribal Councils, Voting, and The Grand Prize.

The interactions, dynamics and other complexities in the group were explored in terms of the following focal points: Learning outcomes and expectations, peer support, feedback from peers and the facilitator, peer assessment, interpersonal conflict, language issues, stress factors, time concerns, competition, humour,

personal lives, synchronous and asynchronous communication, costs implications, online culture, and retention rate.

An approach that is both qualitative and interpretivist informed this study. The study yielded a huge amount of rich detail for analysis. By crystallising and triangulating the qualitative results obtained from the data a powerful tool with which to investigate the interactions that occurred in *CyberSurviver* was constructed. My focus was thus primarily qualitative because the study, as it was conceptualised, required for a detailed, in-depth interpretation of the case.

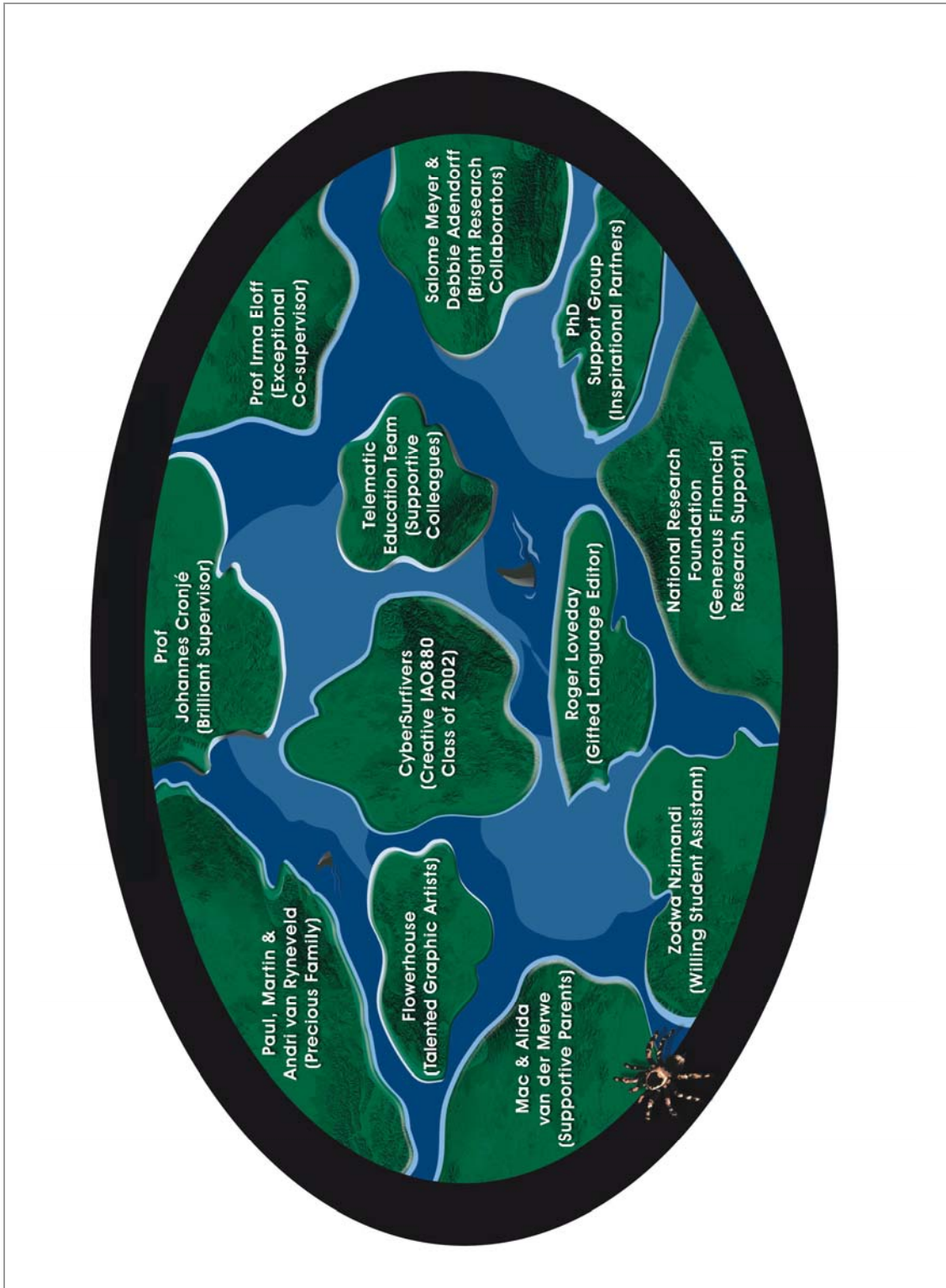
The study demonstrated how the *CyberSurviver* design provided learners with opportunities to interact among themselves, with myself as facilitator – and with the content, the technology, and their various environments. It showed that interactivity need not be excluded from online learning – especially since the introduction of games can be successfully utilised to encourage interaction. It also highlighted the complexities, challenges, and concerns that both the learners and the facilitator face in a module with this type of design.

The findings from the study indicate that the introduction of a game metaphor can inspire high levels of motivation in adult learners and provide a stimulating, all be it challenging, online learning environment.

Keywords

Play, Fun, Games, Interaction, Group dynamics, Complexities of group functioning, *Survivor*®, *CyberSurviver*, Game metaphor, Online learning, Adult learners, Intrinsic and extrinsic motivation, Flow.

Acknowledgement and Gratitude



List of Tables

Table 1:	Research Questions and Key Constructs.....	11
Table 2:	Inclusions and Exclusions.....	17
Table 3:	The Roles of the Various Research Partners.....	22
Table 4:	Characteristics of Play.....	35
Table 5:	Characteristics of Adult Learning.....	46
Table 6:	Common Group Development Models	57
Table 7:	Types of Interaction.....	71
Table 8:	Sources of Data.....	113
Table 9:	Example of a Tribal Assignment.....	128
Table 10:	Example of Individual Assignments.....	129
Table 11:	Example of a Reward Challenge.....	129
Table 12:	Summary of Week 1.....	143
Table 13:	Summary of Week 2.....	152
Table 14:	Summary of Week 3.....	162
Table 15:	Summary of Week 4.....	167
Table 16:	Summary of Week 5.....	172
Table 17:	Summary of Week 6.....	179

List of Figures

Figure 1:	Research Design.....	19
Figure 2:	Conceptual Framework	83
Figure 3:	Research Design.....	87
Figure 4:	Examples of the typical rewards in the Reward Challenges.....	130
Figure 5:	Example of Immunity Challenge 'Evidence'.....	131
Figure 6:	Voting Station Interface.....	132
Figure 7:	Example of 'Current State of Affairs'.....	133
Figure 8:	Example of 'View Final Results'.....	133
Figure 9:	Example of the CyberIsland 'Torch' Before and After the Votes Have Been Tallied.....	134
Figure 10:	Example of the Peer Assessment of Tribal Assignments.....	134
Figure 11:	Peer Assessment Criteria for Collaborative Behaviour.....	135
Figure 12:	Example of the Shelters on CyberIsland.....	152
Figure 13:	End of the Internet.....	178
Figure 14:	Example of 'Evidence'.....	227