

**Web-based training in Public Administration in South Africa:
principles and considerations.**

By

Liza Ceciel van Jaarsveldt

Submitted in fulfilment of the requirements for the degree
MAGISTER ARTIUM: Public Administration in the Faculty of
Humanities, University of Pretoria

Supervisor: Prof. Dr. N.L. Roux
Co-Supervisor: Prof. Dr. P.A. Brynard

May 2003

ACKNOWLEDGEMENTS

I am sincerely thankful to my family, especially my mother, father and sister for their continuous love and encouragement in writing this dissertation. Thank you for the sacrifices you made through the years in helping me to study, learn and gain more knowledge and wisdom. Thank you for always believing in me.

A huge thanks to my supervisor and mentor, Professor N.L. Roux for his help, guidance and assistance and for his continues encouragement. I want to thank Professor Roux for his patience, especially in times when I had none. My thanks also goes to my co-supervisor, Professor P.A. Brynard for all his assistance.

I would also like to thank Me. Yolanda McCabe for all her continuous support, help and friendship. Thank you for the computer assistance and grammar tips; it made a big difference to my research.

Thank you to all my friends, especially the ones I neglected.

And last but not least, thank you to Professor J.O. Kuye and the School of Public Management and Administration (SPMA) for all the help, guidance and support I receive. I am eternally grateful for the opportunity to work, study, learn and grow at SPMA.

ABSTRACT

The use of information technology for the delivery for educational programs is growing rapidly worldwide. In the United States of America and Australia the number of higher education institutions which are making use of online education to teach Public Administration is constantly increasing. Surveys done by the National Association of Schools for Public Administration and Affairs (NASPAA) in the United States of America found heightened interest in distance education. In 1995 it was found by NASPAA that Public Administration was offered by 12% of higher educational institutions to students online. One year later the number had increased to 24%. The last NASPAA survey in 2000 showed an increase of 39%. It is possible for students in the United States of America and Australia to complete a Public Administration degree online. However, in South Africa the use of web-based training for the delivery of Public Administration as a science discipline is still under utilised. It was found that only six, or 20% of the higher educational institutions offering Public Administration to students in South Africa, made use of web-based training in 2002. This compares poorly with the United States of America and Australia.

Due to distance, time and financial constraints it therefore becomes difficult for officials or students interested in government related studies, to travel to a university or even to take the necessary three years to study for a Public Administration degree. Web-based training programmes should provide the opportunity to address these problems. By redesigning the content of Public Administration courses to be completed on the World Wide Web, higher educational institutions in South Africa should be able to reach more students, than would normally be the case.

Although South Africa is the best developed of all the African countries with regard to the use of information and communication technology (ICT), South Africa still experience some limitations. These limitations include access to computers, infrastructural development, telephone line connectivity, and in many cases access to electricity.

Key terms:

Web-based training

Information and communication technology

World Wide Web

Internet

Infrastructure

Development

Online education

Computer

Computer literacy

Computer access

Telematic teaching

Public Administration

SAMEVATTING

Die Internet en die Wêreld Wye Web word vir geruime tyd al gebruik vir die voorsiening van aanlyn onderwys aan die gemeenskap. In lande soos die Verenigde State van Amerika en Australië word nuwe Internet tegnologie al vir die afgelope paar jaar met groot sukses gebruik. Die getal hoër onderwys instellings wat van aanlyn studie gebruik maak in Publieke Administrasie, het vanaf 12% in 1995 gegroei na 39% in 2000. Dit is moontlik vir studente in die Verenigde State van Amerika en Australië om 'n volledige graad in Publieke Administrasie aanlyn te voltooi. In Suid-Afrika is die gebruik van aanlyn studie in Publieke Administrasie egter nie op dieselfde vlak van ontwikkeling nie. Slegs ses, of 20%, van die hoër onderwys instellings in Suid-Afrika het in 2002 van aanlyn studie gebruik gemaak om studente van inligting te voorsien in Publieke Administrasie. Die bogenoemde getal vergelyk swak met die Verenigde State van Amerika en Australië, waar aanlyn studie aan die toeneem is.

Vir staatsamptenare in Suid-Afrika is dit toenemend noodsaaklik om Publieke Administrasie te bestudeer, aangesien dit bydraend kan wees tot meer effektiewe en professionele werksverrigting in die openbare sektor. As gevolg van geografiese redes en die groot afstand tussen plattelandse gebiede en sommige universiteite is dit egter moeilik vir staatsamptenare om die gemiddelde drie jaar studieprogram vir 'n graad in Publieke Administrasie te volg. Deur Publieke Administrasie aanlyn te studeer kan 'n staatsamptenaar met gemak sy werk voltooi en studeer op tye wat hom/haar pas.

Deur die inhoud van kursusse in Publieke Administrasie te herontwerp vir doeleindes van Wêreld Wye Web studie behoort hoër tersiêre opvoedkundige instellings van Suid-Afrika meer studente te bereik as wat normaalweg die geval is.

KERN WOORDE

Internet

Wêreld Wye Web

Onderrig

Aanlyn studie

Inligtingstegnologie

Infrastruktuur

Ontwikkeling

Rekenaar geletterdheid

Publieke Administrasie

Internet toegang

Internet kennis

TABLE OF CONTENT

CHAPTER 1	PAGE
INTRODUCTION AND RESEARCH DESIGN	
1.1 General introduction	1
1.2 Frame of reference	3
1.3 The objective of the research	4
1.4 Problem statement	4
1.5 Hypothesis formulation	6
1.6 Possible research contributions	6
1.7 Research approach and methodology	6
1.8 Definitions of terminology	7
1.9 The structure of the research	12
CHAPTER 2	
THE NATURE OF WEB-BASED TRAINING	
2.1 Introduction	13
2.2 Elements of globalisation	14
2.3 Globalisation and education	15
2.3.1 A focus on abstract concepts	16
2.3.2 The use of a holistic approach	16
2.3.3 Enhancing the students ability to acquire and utilise knowledge	16
2.3.4 Produce scientifically and technically trained persons	17
2.3.5 Team work	17
2.3.6 Break the boundaries of space and time	17
2.4 The global information society	18
2.5 The history of distance education	20
2.6 The meaning and implication of distance education	22
2.7 Perspectives on web-based training	24
2.7.1 Informational web use	25

2.7.2	Supplemental web use	25
2.7.3	Essential web use	25
2.7.4	Communal web use	26
2.7.5	Immersive web use	26
2.8	Individuals involved in web-based training	29
2.8.1	Project manager	30
2.8.2	Project leader	30
2.8.3	Instructional designer	30
2.8.4	Web student	30
2.9	Responsibilities of the lecturer and the student	31
2.9.1	The responsibilities of the lecturer	31
2.9.2	The responsibilities of the student	33
2.10	Communication tools and features used in a online course	34
2.11	The advantages and disadvantages of web-based training	39
2.11.1	The advantages of web-based training	39
2.11.2	The disadvantages of web-based training	41
2.12	Implementing web-based training	42
2.13	Conclusion	44

CHAPTER 3

WEB-BASED TRAINING IN PUBLIC ADMINISTRATION IN SELECTED COUNTRIES

3.1	Introduction	45
3.2	The United States of America	46
3.3	Internet use in the United States of America	47
3.3.1	Web-based training in Public Administration in the United States of America	47
3.3.2	United States of America Government online	49
3.4	Australia	52
3.4.1	Internet use in Australia	52
3.4.2	Web-based training in Public Administration in Australia	53
3.4.3	Federal Government Australia	56

3.5 Conclusion	59
----------------	----

CHAPTER 4

DEVELOPMENTS IN INFORMATION TECHNOLOGY CONDUCTIVE TO WEB-BASED TRAINING IN AFRICA AND SOUTH AFRICA

4.1 Introduction	60
4.2 The use of information and communication technology in Africa	61
4.3 Limitations on developing an effective information infrastructure in Africa	69
4.3.1 Computer infrastructure limitations	69
4.3.2 Database limitations	70
4.3.3 Administrative limitations	70
4.3.4 Internal network limitations	70
4.3.5 Servicing limitations	71
4.3.6 Internal limitations	71
4.3.7 Human resource requirements	71
4.4 Education in Africa	73
4.4.1 Association of African Universities	73
4.4.2 African Virtual University	73
4.4.3 Telematics for Africa Development Consortium	75
4.5 Steps to improve information technology in Africa	76
4.6 The Southern African region	79
4.6.1 The Centre of Specialisation in Public Administration and Management (CESPAM)	80
4.6.2 The Distance Education Association for Southern Africa	81
4.7 Conclusion	83

CHAPTER 5

THE USE AND DEVELOPMENT OF INFORMATION AND COMMUNICATION TECHNOLOGY AND WEB-BASED TRAINING IN SOUTH AFRICA

5.1	Introduction	84
5.2	A population and geographical overview of South Africa	85
5.3	The level of information technology and distance education in South Africa	85
5.3.1	The South African Institute for Distance Education (SAIDE)	86
5.3.2	Confederation of Open Learning Institutions of South Africa COLISA	87
5.3.3	School Net South Africa	87
5.3.4	Tele-medicine	88
5.4	The future of information technology and education in South Africa	88
5.5	Current profiles of web-based training in Public Administration in South Africa	90
5.5.1	The use of web-based training to teach Public Administration in universities and technikons in South Africa	91
5.6	The impact of web-based training on educational programmes in Public Administration	107
5.6.1	The Knowledge Exchange Learning Partnership (KELP)	108
5.6.2	The Collaboratory on Technology Enhanced Learning Communities (Cotelco)	109
5.7	Problems and pitfalls with the implementation of web-based training in South Africa	112
5.8	Conclusion	115
CHAPTER 6		
CONCLUSION AND RECOMMENDATIONS		116
LIST OF SOURCES		123
ABSTRACT		143
SAMEVATTING		145

CHARTS, FIGURES AND TABLES

Table 2/1	The paradigm shift in education	24
Table 2/2	The generations of distance education delivery	25
Figure 2/3	University of Pretoria Flexible learning model	28
Figure 2/4	Flexible learning model	30
Figure 2/5	Hypothetical illustration of the composition of a web-based programme	38
Table 2/6	Implementing a web-based training course	43
Table 3/1	Services available from the FirstGov website	52
Table 3/2	Members of Universitas 21	57
Table 4/1	Population number of African countries	65
Table 4/2	The number of Internet subscribers on the African continent for 2001	67
Table 4/3	Internet use in African countries for 2002	70
Table 4/4	Africa's Internet use in comparison to the rest of the world for 2001	71
Table 5/1	Universities in South Africa	95
Table 5/2	South African universities offering Public Administration by using web-based training	96
Table 5/3	Universities currently offering web-based training in Public Administration in South Africa	99
Table 5/4	Technikons in South Africa	102
Table 5/5	South African technikons offering Public Administration by using web-based training	103
Table 5/6	Technikons currently offering web-based training in Public Administration in South Africa	105
Chart 5/7	Web-based training in Public Administration in South Africa	109
Table 5/8	Cotelco partner universities	113
Table 5/9	Computer use in South African schools for 2000	116