The usability of a computer-based Statistics Data and Story Library in the South African context

A research essay

Presented by

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Submitted in partial fulfillment of the requirements for the degree

Magister Educationis
In
Computer-Assisted Education

Faculty of Education
University of Pretoria

October 2001

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Abstract

Key words:
Computer assisted education, the usability of, usability, statistics, Statistics data and story library, statistics questions, statistics database of questions, database design, web page design, computer-based statistics

Vista University is known in South Africa as a historically disadvantaged or black university. It is a multi-campus university (it has eight campuses throughout South Africa) and caters for learners from historically disadvantaged backgrounds. The Department of Mathematics and Statistics holds an annual meeting to coordinate the activities in the department across all eight campuses. Attendance is compulsory for all lecturers from all the campuses. Every year the same problem arises, which is to have examination papers drawn up that will be of a uniform standard across all the campuses. It is a very frustrating task for the compiler of the papers to get contributions from the lecturers that are submitted on time, in the agreed format and of an acceptable standard. During the 2000 meeting it was unanimously agreed that the long-term solution to the problem would be a **database of questions** in the agreed format and of an acceptable standard. Because the lecturers are spread over South Africa, this database must be available through Vista's Intranet.

The development of such a product would involve a great deal of time and energy, and the most important question to ask is whether the lecturers would use the product. The solution is to design a prototype of the product: a database with a Web-based portal populated with a sample of questions. The usability of such a database must be determined to ensure the effectiveness of the final product.

The aim of this study is, after a prototype of a Web-based **S**tatistical Data and **S**tory Library in the **S**outh African Context (in future referred to as **SSS)** has been implemented, to **determine the usability** of the product**.**

Opsomming

Die bruikbaarheid van ’n rekenaargesteunde Statistiek Data en Storie Biblioteek in die Suid-Afrikaanse konteks

’n skripsie deur

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Sleutelterme

Rekenaargesteunde onderrig, Die bruikbaarheid van, Bruikbaarheid, Statistiek, Statistiek data en storie biblioteek, Statistiek vrae, Databasis van statistiek vrae, Databasisontwerp, Web-bladsyontwerp, Rekenaargebaseerde Statistiek

Vista Universiteit bestaan uit agt kampusse versprei regoor Suid-Afrika en dien ’n deel van die Suid-Afrikaanse bevolking met ’n eie nie-Westerse kultuur en met Engels nie as moedertaal nie.

Die geografiese verspreiding van die universiteit het tot gevolg dat die opstel van vraestelle wat

- aan neergelegde standaarde moet voldoen,
- op vasgestelde keerdatums ingehandig moet word en
- alle betrokke dosente tevrede moet stel, ’n feitlik onbegonne taak is.

Tydens ’n departementele vergadering het die dosente van die Departement Wiskunde en Statistiek besluit dat die beskikbaarheid van ’n databasis van vrae ’n oplossing van die probleem mag blyk te wees. Sodanige databasis moet toeganklik vir al die dosente wees.

Op die Internet is soortgelyke databasisse reeds beskikbaar. Die groot nadeel van hierdie databasisse is dat meeste van die “stories” waarop die vrae gebaseer is, buite die beleweniswêreld van die Vista-studente met hulle eie kultuur en Engels-taalvaardigheid is. Waardetoevoeging tot ’n gebruikersvriendelike databasis van vrae sou vrae in ’n “Suid-Afrikaanse konteks” wees.

Die doel met hierdie navorsingsprojek was om ’n prototipe Internet-gebaseerde databasis te ontwikkel en die doeltreffendheid daarvan te toets. Die vraag was: sou die rekenaargesteunde “gereedskap” wel deur die dosente gebruik word?

Die resultate toon aan dat die databasis inderdaad aan die behoeftes en vereistes van die dosente voldoen.

Acknowledgements

I would like to express my special thanks to Professor Johan Knoetze for his professional guidance and support and to my husband for his patience with a wife who is “always at the computer”.

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LIST OF ACRONYMS

ADO	ActiveX Data Objects
DSN	Data Source Name
HTML	HyperText Markup Language
http	Hypertext Transfer Protocol
IIS	The Internet Information Server
PWS	Personal Web Server
SQL	Structured Query Language
URL	Universal Resource Locater
VBScript	Visual Basic Script

LIST OF DEFINITIONS

ODBC	ODBC is a programming interface that enables applications to access data in database management systems that use Structured Query Language.
SQL	SQL is a standardised language that makes it easy to store, update and access information.