

**HOW SOUTH AFRICAN FURTHER EDUCATION AND
TRAINING LEARNERS ACQUIRE, RECALL, PROCESS
AND PRESENT INFORMATION IN A DIGITALLY
ENABLED ENVIRONMENT**

by

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Abstract

The aim of the research was to investigate how South Africa Further Education and Training learners acquire, recall, process and present information in a digitally enabled environment.

To determine how a changing society and technology have influenced the way learners interact with information in an educational environment, recent changes in society and their influences on young people were examined as well as the traits of the generations with respect to character, family life, the future, peers and technology. This revealed that learners today need

- material in visual format;
- to find or create their own learning content;
- fast access to learning material; and
- learning material with long-term career value.

It was also apparent that they are motivated by technology used in information transfer, are active learners and regard learning as a social activity.

The methodology of case study action research was used. Note was taken of measures to ensure reliability and validity and applied to this research to ensure that the findings are valid and reliable as well as generalisable in South Africa beyond the confines of Pinelands High School (PHS).

Two case studies observing the learners at PHS were undertaken:- creating web sites for the *ThinkQuest* web design competition and a building a web-based CV. The learners were heterogeneous and displayed a range of skills, ages, academic abilities and prior experiences. Many different management formats were employed, such as learning at a distance, in a contact environment, with examples and specific or open-ended instructions as well as different forms of motivation, time for the work in hand, etc.

The major findings of the research were the influence of peers and importance of external motivation in the form of grades on the learners' cognitive, affective and physical learning activities in the computer laboratory. Secondary findings indicated the importance of content, examples, instructions, time, mental state, classroom ecology, contact environment and software in the way learners acquired, recalled, processed and presented information.

The research concluded with a set of actions that should be taken to ensure successful interaction with information in a digitally enabled environment.

Key Words

Affective perspective

Classroom ecology

Cognitive perspective

Computer anxiety

Computer laboratory

Computer literacy

Digital environment

Digital information environment

Information processing

Physical perspectives

Nomenclature

The terms African, Asiatic, Coloured and White are used without racist intention. These terms continue to have currency in post-apartheid South Africa. The terms used are consistent with current local usage, although they can be regarded as social constructions rather than essential categories. The term African refers to those people of black African descent. Asian refers to those people of Asian descent. Coloured refers to people of mixed European, Asian and indigenous descent. White refers to those people of European descent.

Glossary of Terms

Persons in the educational context

Learners	In South Africa the word refers to what are commonly known as students in the United States and pupils in the United Kingdom.
Facilitator	In South Africa the word educator is the official designation of what has always been known universally as a teacher, in recognition of the movement away from teacher centred education towards learner-centred education, where the teacher acts more as a facilitator.
Teacher	
Educator	
FET learners	Adolescents in the South African education system of 16 years and older in Grades 10, 11 or 12 as well as adults are officially defined as Further Education and Training (FET) learners.

Environment

Contact situation	A situation where the learners and the teacher are physically in the same classroom at the same time.
At a distance	Where the learners are not in the same physical space as other learners with whom they are working.

Perspectives through which one can examine the educational phenomenon

Cognitive perspective	The recall or recognition of specific facts, procedures and concepts that serve in the development of intellectual abilities and skills as the learners acquire, recall, process and present information.
Affective perspective	How learners deal with <ul style="list-style-type: none">• one another and the information presented as content and as skills;• their emotions, feelings, values, appreciation, enthusiasm, motivation, attitudes and relationships; and• situations as they acquire, recall, process and present information.
Physical perspective	The learners' physical movement, coordination, use of motor skill areas, manipulative or motor skills in acquiring, recalling, processing and presenting information; including the environment in which they work.

Assumptions	The word <i>digital</i> and <i>electronic</i> are used synonymously.
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List of Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
CD	Compact disk
CD-ROM	Compact disk read-only-memory
CV	Curriculum vitae
FET	Further Education and Training
GET	General Education and Training
ICQ	I Seek You
IRC	Internet Relay Chat
MTV	Music television
SG	Standard Grade
SMS	Short Message Service
PHS	Pinelands High School
URL	Uniform resource locator
WCED	Western Cape Education Department
VBA	Visual Basic for Applications

Software Cited

3D Studio Max Autodesk, Inc.
Adobe After-Effects 4 Adobe Systems Incorporated
Adobe Photoshop Adobe Systems Incorporated
CoffeeCup Firestarter CoffeeCup Software, Inc.
Crossword Compiler Across Export Library
Flash Macromedia, Inc.
Geometer's Sketchpad Key Curriculum Press
GIF Construction Set Alchemy Mindworks Inc.
HotDog Pro Sausage Software
JavaScript
Inspiration Inspiration Software, Inc.
Jigsaws Galore Gift Gray Design Associates
Macromedia Dreamweaver Macromedia, Inc.
Macromedia Flash 4 Macromedia, Inc.
MS Access Microsoft Corporation
MS Excel Microsoft Corporation
MS FrontPage Microsoft Corporation
MS PowerPoint Microsoft Corporation
MS Publisher Microsoft Corporation
MS Word Microsoft Corporation
NetOps School Networks Unlimited
Paint Microsoft Corporation
PaintShop Pro Jasc, Inc.
Spex Aspex Software
Tabs Aspex Software

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