

**Principals' Influences on Teacher Professional Development
for the Integration of Information and Communication
Technologies in Schools**

by

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Certificate of proofreading and editing

Certificate of proofreading and editing

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Declaration of authorship

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Philosophiae Doctor: Computer-integrated Education

in

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**at the University of Pretoria, is my own work
and has not previously been submitted by me for
a degree at this or any other tertiary institution.**

Molly Patricia van Niekerk

Signed on the day of 2009.

Pretoria, South Africa.

Abstract

The effective and sustainable use of ICTs (Information and Communication Technologies) in education has become commonplace as it is necessary to keep up with demands of the 21st century. ICT in education has become a tool for the empowerment of both teachers and learners for better teaching and learning. Although various ICT strategies and initiatives are implemented across South Africa, no system-wide effective and sustainable ICT integration in schools has yet come about. The pace of integration is slow and teachers avoid using ICT in their teaching and learning practices due to insufficient training. The aim of teacher professional development (TPD) is to improve teachers' ICT application skills and knowledge, as well as to enable teachers to integrate ICT effectively in their classroom practices.

Principals play a vital role in leading school reform, implementing innovations and bringing about change. The widespread assumption that high-quality leadership is an essential dimension of successful school management, leads to the question of how principals can influence teachers' effective and sustainable integration of ICT into classrooms through TPD activities. Therefore, the purpose of this research was to determine the influence that principals have on teachers' ICT integration through TPD. As school leadership is frequently cited as an essential for the successful integration of ICT into education, the very position of the principal is associated with authority, accountability and power.

My initial research is based on Stoner's (1999) Adapted Life Cycle Model of Learning Technology Integration. I used this model to illustrate the principals' influence on teachers' integration of ICT into education. From this review subsidiary questions emerged. Qualitative research through in-depth interviews formed the basis of an interpretative perspective, allowing principals to reflect on ICT integration, as well as their influence on teachers' use of ICT. This study followed a basic grounded theory approach where I assumed an inductive stance and strived to derive meaning from the data in order to develop new theory. Pre-defined theoretical criteria determined the selection of the respondents to ensure validity of the data. The seven principals represented secondary schools across cultural and socio-economic levels. The perceptions and experiences of the principals were analysed, compared, and patterns of influence were identified.

This study indicated that principals do not only influence the integration of ICT in classrooms through their leadership and management styles, but also through their attitude toward ICT integration, knowledge on related ICT and TPD issues, as well as their strategic thinking on

ICT integration. Emerging findings on the role of the principal lead to new insights on the empowerment of teachers. The study resulted in a proposed theoretical framework that indicates the interrelatedness of the emerging patterns that influence the principals' role through TPD.

Keywords

effective education
Information Communication and Technology (ICT)
integration
leadership and management styles
principal's influence
principal's leadership
strategic thinking
sustainable education
teacher professional development (TPD)
teachers

My heartfelt thanks to my Lord and Saviour for the strength and insight to complete this research study

Dedication

I dedicate this thesis to my mother, Pat van Niekerk.

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List of addenda

- 1.1 International research projects
- 1.2 ICT's potential in South Africa
- 1.3 National policy framework
- 1.4 Rationale for ICT implementation
- 1.5 National implementation strategies
- 1.6 National implementation project

- 2.1 Management and leadership models
- 2.2 Leadership styles

- 3.1 Hermeneutic Unit created with Atlas.ti™
- 3.2 Respondents' confirmation of transcription
- 3.3 Respondents' informed consent
- 3.4 Ethics document

List of abbreviations

| | |
|--------|--|
| Becta | British Educational Communications and Technology Agency |
| CAQDAS | Computer Aided Qualitative Data Analysis Software (Atlas.ti™) |
| COP | Community of Practice |
| DoE | Department of Education |
| HOD | Head of Department |
| HU | Hermeneutic Unit – everything of relevance to a research project (Atlas.ti™) |
| ICT | Information and Communication Technology |
| IEA | International Association for the Evaluation of Educational Achievement's |
| IQMS | Integrated Quality Management System |
| IT | Information Technology |
| KDA | Kids Development Academy |
| NCREL | North Central Regional Educational Laboratory |
| NGO | Non Governmental Organisation |
| OFSTED | Office for Standards in Education |
| SCOPE | South African – Finnish Co-operation Programme in the Education Sector |
| SGB | School Governing Body |
| SITES | Second Information Technology in Education Study |
| SMT | Senior Management Team |
| TPD | Teacher Professional Development |