Framework for the development and evaluation of educational DVDs and web-based multi-media clips for Grade 8 and 9 History

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Abstract

The White Paper on e-Education[1] promotes the use of various information communication technologies (ICTs) to achieve the expected learning outcomes in the different learning areas of the school curriculum. Because most teachers and learners are not yet computer skilled, resource-based learning, supported by digital versatile disc (DVD) technology, is one of the most cost-effective and self-contained educational media that involve minimal infrastructural investment. Educational DVDs provide the opportunity to deliver a constructive multi-media learning experience to learners in rural areas who do not have access to libraries and the Internet. This is especially valuable for history education because DVDs allow learners to "go time travelling" through history, guided by different learning media and artefacts such as historical photographs, illustrations, film material, music, speeches, newspaper reports, political cartoons, maps, etc. Multi-media learning tools stimulate different learning styles and broaden the range of the learning experience in general. This paper provides a research framework for the development and evaluation of educational DVDs and Web-based multi-media clips for grades 8 and 9 history in the social sciences learning area. These clips are currently being developed at the Faculty Education Sciences of the North-West University. These educational media, with accompanying teacher manual and learner word-cards, are intended as inexpensive support of quality education and sustainable social development in South Africa.

Keywords: Educational; DVD; Web-based; Multi-media; History high-tech teaching; Grades 8-9 history alive.

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1   Department of Education, "White Paper on e-Education" (Pretoria, Department of Education, 2004).

Introduction

Since 1994, the South African education system has restructured itself on principles of equity, human rights, democracy and sustainable social development. New education policies, legislation and governance structures were developed and implemented on all levels.[2] These include the implementation of the National Qualifications Framework,[3] the Revised National Curriculum Statement for Grade R to 9,[4] and the National Curriculum Statement for Grades 10 to 12.[5] The curriculum statements are based on progressive, learner-centred, outcome-based education[6] with an integrated approach to knowledge. Learners are envisioned who will be imbued with the values and act in the interests of a society based on respect for democracy, equality, human dignity and social justice, as promoted by the Constitution of South Africa.[7] The intention of the outcomes-based approach[8] to education is that all learners should receive equal opportunity to develop their full potential through life-long learning, will be confident and independent, literate, numerate, multi-skilled, compassionate, respectful of the environment, and participate in society as critical and active citizens.[9]

The Revised National Curriculum Statement for Grades R-9[10] and the National Curriculum Statement for Grades 10-12[11] outline specific learning outcomes to help teachers design a robust curriculum around concepts and

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2   Department of Education, *White Paper on Education and Training,* Notice 196 of 1995 (Cape Town, DoE, 1995); DoE, *South African Qualifications Authority,* Act No. 58 of 1995 (Pretoria, DoE, 1995); DoE. *National Education Policy,* Act No. 27 of 1996 (Cape Town, DoE, 1996); DoE, *South African Schools,* Act No. 84 of 1996 (Cape Town, DoE, 1996); HJ Steyn & CC Wolhuter (Eds.), *Education systems: Challenges of the 21st century* (Noordbrug, Keurkopie, 2008).

3   DoE, *South African Qualifications Authority,* Act No. 58 of 1995; DoE, *The National Qualifications Framework and Curriculum Development* (Pretoria, South African Qualification Authority, 2000); DoE, "National Qualifications Framework" (Cape Town, Government Gazette, 4: 30778, 2008); SAQA, "South African Qualification Authority", Position Paper on NQF and Curriculum 2005" (available at: http://www.saqa.org.za, as accessed on 15 April 2008).

4   DoE, "Revised National Curriculum Statement for Grades R-9" (Government Gazette, 443:23406, 2002).

5   DoE, "National Curriculum Statement for Grades 10-12 (General)" (Cape Town, DoE, 2003); J Jansen & P Christie (Eds.), Changing curriculum: Studies on outcomes-based education in South Africa (Cape Town, Juta and Co, 1999); SAQA, "South African Qualification Authority", Position Paper… (available at: http://www.saqa.org.za, as accessed on 15 April 2008).

6   W Spady, *Outcome-based education: Critical issues and answers* (Arlington, American Association of School Administrators, 1994); W Spady, *Outcome-based education: The way forward* (Video Presentation to the Western Cape Education Department, 1999).

7   Republic of South Africa, "The Constitution of the Republic of South Africa, Act 108 of 1996, as adopted on 8 May 1996 and amended on 11 October 1996 by the Constitutional Assembly" (Pretoria, Republic of South Africa, 1996).

8   W Spady, *Outcome-based education…* .

9   DoE, "National Curriculum Statement for Grades 10-12 (General)", (Cape Town, DoE, 2003), p. 17.

10   DoE, "Revised National Curriculum Statement for Grades R-9 ", (Government Gazette, 443: 23406, 2002).

11   DoE, "National Curriculum Statement for Grades 10-12… .

principles worth knowing, with the aid of assessment standards.[12] Teachers are responsible for the development and facilitation of programmes and activities to empower learners with skills, knowledge and constitutional values.

The school subject history is grouped under the learning area social sciences. The Revised National Curriculum Statement for Grades R-9: Social Sciences envisages the following learner development for the senior phase (grades 7 to 9) history:[13]

> Learners in this phase can access and place historical information within historical context. For example, they can place events, people and changes in the periods of history studied within a chronological framework, reach valid conclusions based on comparisons, and relate these conclusions to their historical contexts. Learners can identify categories of causes and effects - such as immediate and long-term, direct and indirect - and explain and analyse the reasons for and results of events in history. They demonstrate a more critical understanding of the reliability and usefulness of sources (e.g. they can identify omissions, bias and stereotypes), of historical interpretation (e.g. values and methods of investigation of the historian), and of the use and abuse of history (e.g. the influence of issues of race, class and gender on the way history has been written) ... They also demonstrate a critical knowledge and understanding of change and progress, and of the causes and importance of events. At the end of this phase, and with increasing confidence, learners should be able to debate historical issues, and produce well-structured pieces of historical narrative, description and explanation, giving their own interpretations of sources within the context of the South African Constitution and the Universal Declaration of Human Rights.

There are three formal learning outcomes for grades 8 and 9 history:

• Learning Outcome 1: Historical enquiry that will enable the learners to use enquiry skills to investigate the past and present. This include enquiry processes like finding sources; working with sources (asking questions, finding information and also organising, analysing and synthesising information); answering a question (writing a piece of history); and also communicating an answer (communicating historical knowledge and understanding).[14]

• Learning Outcome 2: Historical knowledge and understanding that will enable the learners to demonstrate historical knowledge and understanding. The achieving of this outcome includes important enquiry processes like chronology and time; cause and effect and also similarity and difference.[15]

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12 SAQA, "South African Qualification Authority", Position Paper… (available at: http://www.saqa.org.za, as accessed on 15 April 2008).

13 DoE, "Revised National Curriculum Statement for Grades R-9: Social Sciences" (Pretoria, DoE, 2002), p. 59.

14 Also retrieved from the Social Sciences 2002 doc.

15 DoE, "Revised National Curriculum Statement for Grades R-9…, p. 60.

- • Learning Outcome 3: Historical interpretation that will enable learners to interpret aspects of history. Enquiry processes like interpretation based on historical sources; understanding that there are issues which influence interpretation and also interpreting public representation of the past, archaeology and memory, are important for this outcome.[16]

According to the Revised National Curriculum Statement for Grades R-9: Social Sciences,[17] the focus of knowledge to attain the three learning outcomes in grade 8 is reflected by the following historical themes:

- • Changing worlds: the French Revolution;

- • Changing worlds: Industrialisation;

- • Resisting British control;

- • The experience of Colonialism in the Nineteenth and Twentieth Centuries;

- • Changing ideas and technologies – World War I.

The knowledge focus for achieving the three learning outcomes in grade 9 is reflected by the following historical themes:

- • Human Rights issues during and after World War II;

- • The end of World War II and the struggle for Human Rights;

- • Apartheid in South Africa;

- • The Nuclear Age and the Cold War;

- • Issues of our time;

- • A new vision for Africa: Africa's economic recovery.

Each of the knowledge-focused learning outcomes has associated assessment standards which describe what learners should know and be able to demonstrate in order to achieve the learner development for grades 8 and 9 history (Table 1). The assessment standards embody the knowledge, skills and values required to achieve the learning outcomes, and show conceptual progression from grade 8 to grade 9.

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16 DoE, "Revised National Curriculum Statement for Grades R-9…, p. 60.
17 DoE, "Revised National Curriculum Statement for Grades R-9…, pp. 61-62.

Table 1: Assessment Standards for Grade 8 and 9

Grade 8	Grade 9
Finds Sources Continues to identify and select a variety of historical and archaeological sources relevant to an inquiry	**Finds Sources** Investigates a topic by asking key questions and identifies a variety of relevant sources to explore this topic.
Works with Sources Evaluates the sources used (e.g."Who create the sources?" Is it reliable?", How useful is the information?")	**Works with Sources** Asks significant questions to evaluate the sources (e.g. to identify bias and stereotypes, omissions and gaps)
Works with Sources Interprets graphical and statistical sources	**Works with Sources** Analyses the information in the sources
Answers the Question Presents an original idea as part of answer to questions posed.	**Answers the Question** Presents an original idea as part of answer to questions posed.
Communicates the Answer Communicates knowledge and understanding by constructing own interpretation and argument based on historical sources (including extended writing, artwork, graphics and drama); uses information technology where available and appropriate.	**Communicates the Answer** Communicates knowledge and understanding by constructing own interpretation and argument based on historical sources (including extended writing, artwork, graphics and drama); uses information technology where available and appropriate.
Chronology and Time Begins to make links between historical events and processes in different contexts in the same period.	**Chronology and Time** Places events, people and changes in the periods of history studied within a chronological framework.
Cause and Effect Recognises the causes and effects of events vary in importance.	**Cause and Effect** Identifies categories of causes and effects (e.g. immediate and long-term, direct and indirect). Explains and analyses the reasons for and results of events in history.
Change and Continuity Explains changes in a wider historical and environmental context.	**Change and Continuity** Recognises that change and development does not always mean progress.

Problem Statement

According to the Revised National Curriculum Statement for Grades R-9: Social Sciences,[18] teachers need to be accountable to learners, parents, the education system, and the broader community, when assessing their learners. This is done through reporting. Written reports, oral and practical

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18   DoE, "Revised National Curriculum Statement for Grades R-9…, p. 3.

presentations, and displays of learners' work and exhibitions may be used. Each learner's progress report should include information on the learning outcomes achieved, as well as the learner's competencies, support needed, and constructive feedback. The report should also contain comments about the learner's performance in relation to peers, as well as the learner's previous performance in relation to the requirements of the learning area. Reporting to parents should be done on a regular basis so as to encourage their involvement and participation. Teachers report learner progression at the end of each term via formal report cards. Currently, many teachers struggle to work out practical assessment tools, both for individual and group assessment, mainly because of a lack of resources such as learning material, multi-media, pre-designed learner work cards and teacher manuals.

Research Question

The Department of Education promotes the use of various information communication technologies (ICTs), e.g. computer-assisted learning, to achieve the learning outcomes of the different learning areas. The former Minister of Education, Naledi Pandor, made a strong commitment to ICTs in education, and in 1994 the White Paper on e-Education was published as a formal policy for the system-wide implementation and integration of ICTs in the South African education system.[19] Currently, however, many teachers and learners still do not have the necessary computer knowledge, technical skills or infrastructure to use ICTs for teaching and learning. In 2007, only three in every ten schools had access to computers, and only one in every ten schools had Internet access, mainly through dial-up connections.[20] In the South African context, resource based learning,[21] including DVD technology, is still one of the most cost-effective and self-contained media, which involves minimal infrastructure investment beyond a DVD player, TV or Computer Monitor, and power supply. Richard Diercks, president of the Richard Diercks Co. in Minneapolis, Minnesota, that develops and produces educational DVDs, promotes DVD technology for educational purposes as follows:[22]

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19 DoE, "White Paper on e-Education", (Pretoria, DoE, 2004).
20 DoE, "The Thutong portal" (available at: www.Thutong.org.za, as accessed on 26 Sept. 2008).
21 S Brown & B Smith, *Resource-based learning* (Herndon, Stylus Publishing, 1996).
22 DG Block, "DVD Today: DVD makes teacher training easy in the Marshall Islands", *Emedia Magazine*, July 2002, pp. 21-22.

DVD is the only technology that is not a "yeah but" proposition. It gives us everything that we need. That includes high-quality audio, high-quality video, capacity, interactivity and cheap delivering with a large installed base... With a DVD the teacher can bring together, in a controlled situation, a combination of audio-visual experiences. In the subject history, these may include pictures, historical photographs, illustrations, videos, films, newspaper reports, political cartoons, speeches, historical artefacts, maps, sound clips, speeches, music, etc. With this the teacher creates the opportunity for the learners to loosen themselves from the present time and go "time travelling". This in turn, motivates learning, encourages active participation, and broadens the range of learning experiences.

As the objectives of the White Paper on e-Education[23] are systematically implemented and integrated by the National Department of Education, more and more learners and teachers will become computer and Internet competent, and Web-based media will become an integral part of future education in South Africa. Currently, very few educational DVDs and Web-based multi-media clips are available to support teachers and learners in order to achieve the learning outcomes and assessment standards of the Revised National Curriculum Statement. From the above exposition the research question arises: Is it possible to develop and evaluate educational DVDs and Web-based multi-media clips for grades 8 and 9 history according to the Revised National Curriculum Statement, learning outcomes and assessment standards?

Aim

The aim of this research project is to develop and evaluate educational DVDs and Web-based multi-media clips with learner work cards and a teacher manual for grade 8 and 9 history in the social sciences learning area according to the Revised National Curriculum Statement, learning outcomes and assessment standards. The aim of this theoretical paper is to provide a framework for the development and evaluation of the proposed DVDs.

Research Methodology

Literature Review

Resource based learning,[24] which includes educational digital versatile discs

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23   DoE, "White Paper on e-Education" (Pretoria, DoE, 2004).
24   S Brown & B Smith, *Resource-based learning* (Herndon, Stylus Publishing, 1996).

(DVDs), is still one of the most cost-effective and self-contained media that demands minimal infrastructural investment beyond a DVD player, TV or computer monitor, and power supply. Internationally, online learning is increasingly becoming the learning and teaching medium for education. However, the digital divide is still hampering online learning, especially in developing countries where learners and students do not have Internet access or high speed broadband. In South Africa where most learners and teachers are not computer literate, and often do not have access to libraries especially in rural areas, the use of educational DVDs is one of the most effective tools to transfer audio-visual knowledge for teaching and learning purposes. DVDs also seem to be a valuable bridge between traditional resource based learning and e-learning, and can even be used to facilitate learning amongst learners with special needs. For example, at the University of Wollongong, Australia, researchers addressed the digital divide in the use of broadband through the provision of media rich content by DVD in a hybrid DVD/WebCT environment;[25] while researchers at the University of Oregon developed and evaluated educational DVDs with expanded captions adapted for students who are deaf or hard of hearing, and found no significant difference in the comprehension levels of these students and students using standard captions.[26] This shows that resource based learning technologies, such as DVDs, can be adapted as effective educational resources for learners with special educational needs.

At the UK Midlands University, educational DVDs are used as an evaluation tool for the assessment of communication skills and knowledge of nursing students.[27] The DVDs provide recorded scenarios to students, who after watching the DVDs, are assessed via a series of questions inviting them to consider communicative aspects of the events depicted in the DVDs. Educational DVDs can be used in the same manner within the South African educational context to help assess learner skills, understanding and knowledge. Educational DVDs can not be used for teaching and learning only, but also as a self-evaluation tool for teachers. For example, the Education and Training Inspectorate (Inspectorate) of Northern Ireland developed a series

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25 R Caladine, "Learning environments of the future: narrow to broadband via DVD", *Meeting at the crossroads*, 2001, pp. 117-123.

26 L Anderson-Inman, F Terrazas & U Slabin, *Supported video projects: The use of expanded captions to promote student comprehension of educational videos on DVD* (Oregon, National Center for Supported eText, University of Oregon, 2008).

27 P Crawford, A Aubeeluck, B Brown, L Cotrel-Gibbons, D Porock & C Baker, "An evaluation of a DVD trigger based assessment of communication and care delivery skills", *Nurse Education Today*, 2009, 29, pp. 456–463.

of self-evaluation DVDs for teachers in order to help foster a culture of self-evaluation and constant self-improvement.[28]

Specifically in the field of history, various history DVDs have been produced and are commercially available. Examples include: The History Channel's French Revolution (1 DVD);[29] The Era of Colonization (1 DVD);[30] The Educational Video Network's Industrial Revolution (1 DVD);[31] The History Channel's America at War series (14 DVDs);[32] The Best of the History Channel series (40 DVDs);[33] The Complete Story: World War I (3 DVDs);[34] The Complete History of WWII (5 DVDs);[35] The National Archives WWII in Colour (5 DVDs);[36] Vivendi Entertainment's Nelson Mandela: Son of Africa, Father of a Nation (1 DVD),[37] etc. While these DVDs are also intended as educational media, most are produced as entertainment television documentaries about world history, without recognising the specific learning outcomes of history as a school subject.

Exploring the literature, the research team could not find any published research framework for the development and evaluation of educational DVDs for history or any other school subjects. Very few studies could be found on the evaluation or impact assessment of educational DVDs in general. The Massachusetts Adult Literacy Technology Team uses the following methodology to evaluate educational technology such as DVDs: detailed written surveys, in-depth follow-up telephone interviews, focus group interviews, weekly e-mail questions, brief written surveys, site visits and observation protocols for technology use.[38] Some researchers use pre- and post-test knowledge questionnaires, and technical and affective technology evaluation questionnaires.[39] Other evaluation criteria for educational ICTs include: design, context and pedagogy, activities, innovation, constraints and

28 F Crawford, "Improvement through self-evaluation in pre-school education", *Questions of Quality*, 2005, pp. 178-182.
29 History Channel, *French revolution* (New York, History Channel, 2005, 1 DVD).
30 Schlessinger Media, *The era of Colonization,* 1585-1763 (New York, Schlessinger Media, 2003, 1 DVD).
31 Educational Video Network, *Industrial Revolution* (Huntsville, Educational Video Network, 2004, 1 DVD).
32 History Channel, *America at War Megaset* (New York, History Channel, February, 2008, 14 DVDs).
33 History Channel, *The Best of the History Channel I-IV* (New York, History Channel, 2008, 40 DVDs).
34 Timeless Media Group, *The Complete Story: World War I* (Eugene, Timeless Media Group, 2003, 3 DVDs).
35 Madacy Entertainment, *The Complete History of WWII* (Quebec , Madacy Entertainment, 2003, 5 DVDs).
36 National Archives, *The National Archives WWII in Color* (Renton, Topics Entertainment, 2008, 5 DVDs).
37 Vivendi Entertainment, *Nelson Mandela: Son of Africa, Father of a Nation* (Paris, Vivendi Entertainment, 2009, 1 DVD).
38 A Brickman, L Braun & M Stockford, *An evaluation of the use of technology in support of adult basic education in Massachusetts* (Massachusetts, Massachusetts Adult Literacy Technology Team, October, 2000).
39   AR Winstock, T Lea & A Fettell, "Pilot evaluation of an educational DVD for people with opioid dependence", *Drugs: Education, Prevention and Policy*, 16(2), April 2009, pp. 182 – 192.

basic cognition;[40] and educational context, learning experience, preferred activities, usability and used recommendations for improvement.[41] Because no framework could be found in the literature for the development and evaluation of educational DVDs for history education, the research team developed the following framework:

Development and Evaluation Research Framework

Development Phase (Steps A to C on Figure 2)

Figure 1: DVD Set for Grade 8 and 9 History

40 M Morgan, "Evaluating ICT in education using the concept of mediation" (Paper, *ALT-C 2007: 14th International Conference of the Association for Learning Technology*, Nottingham, 4-6 September 2007).

41 E Turtiainen, S Blignaut, CJ Els, TH Laine & E Sutinen, "Story-based U-fractions mobile game in South Africa: Contextualization process and multidimensional playing experiences" (Paper, International Conference on Web-based Learning (ICWL), RWTH Aachen University, Aachen, 19-21 August 2009).
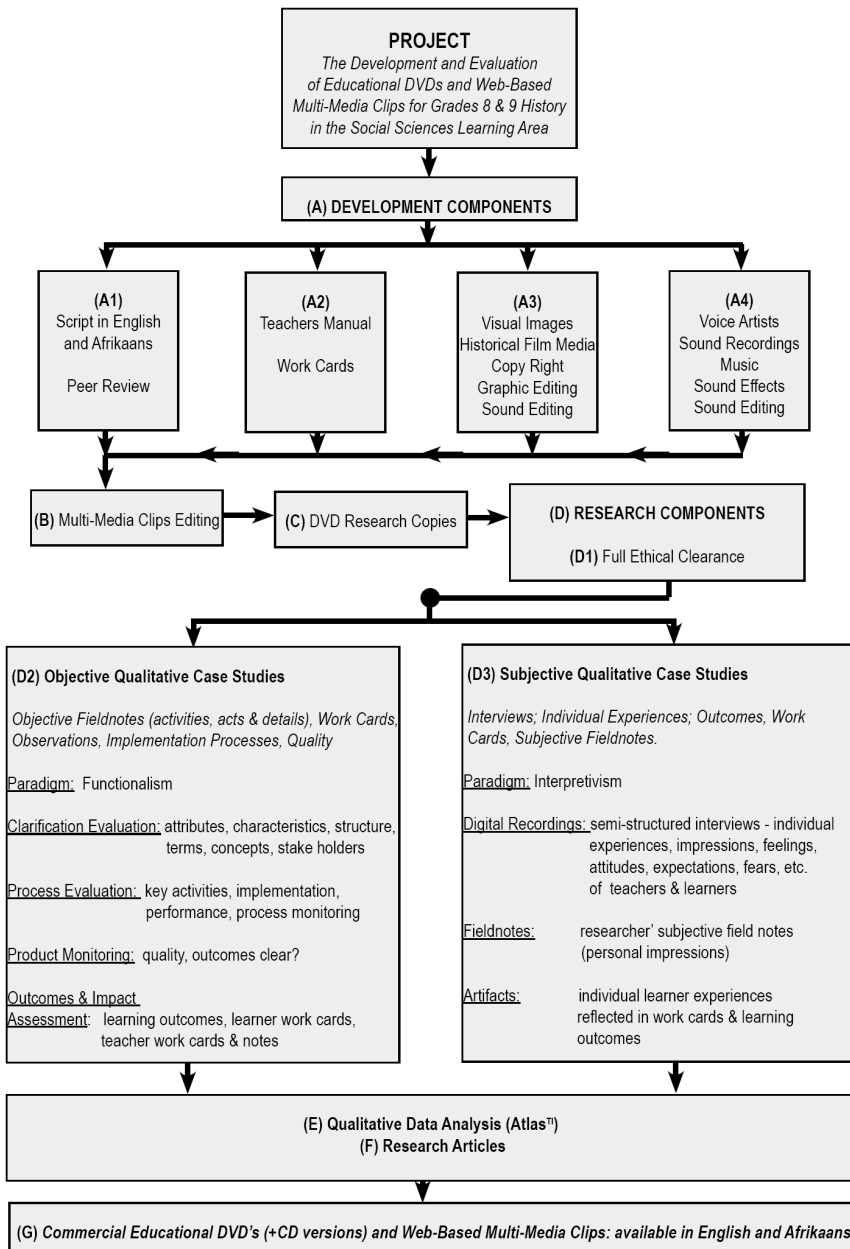
PROJECT
*The Development and Evaluation
of Educational DVDs and Web-Based
Multi-Media Clips for Grades 8 & 9 History
in the Social Sciences Learning Area*

(A) DEVELOPMENT COMPONENTS

(A1)
Script in English
and Afrikaans

Peer Review

(A2)
Teachers Manual

Work Cards

(A3)
Visual Images
Historical Film Media
Copy Right
Graphic Editing
Sound Editing

(A4)
Voice Artists
Sound Recordings
Music
Sound Effects
Sound Editing

(B) Multi-Media Clips Editing

(C) DVD Research Copies

(D) RESEARCH COMPONENTS

(D1) Full Ethical Clearance

(D2) Objective Qualitative Case Studies

*Objective Fieldnotes (activities, acts & details), Work Cards,
Observations, Implementation Processes, Quality*

Paradigm: Functionalism

Clarification Evaluation: attributes, characteristics, structure,
                                        terms, concepts, stake holders

Process Evaluation: key activities, implementation,
                                    performance, process monitoring

Product Monitoring: quality, outcomes clear?

Outcomes & Impact
Assessment: learning outcomes, learner work cards,
                     teacher work cards & notes

(D3) Subjective Qualitative Case Studies

*Interviews; Individual Experiences; Outcomes, Work
Cards, Subjective Fieldnotes.*

Paradigm: Interpretivism

Digital Recordings: semi-structured interviews - individual
                                    experiences, impressions, feelings,
                                    attitudes, expectations, fears, etc.
                                    of teachers & learners

Fieldnotes: researcher' subjective field notes
                            (personal impressions)

Artifacts: individual learner experiences
                           reflected in work cards & learning
                           outcomes

(E) Qualitative Data Analysis (Atlas^{TI})
(F) Research Articles

(G) *Commercial Educational DVD's (+CD versions) and Web-Based Multi-Media Clips: available in English and Afrikaans*

Figure 2: Development and Evaluation Framework

Figure 1 shows the five educational DVDs for grades 8 and 9 that are currently being developed at the Faculty Educational Sciences via d-Media (the Digital Media Centre) of the North-West University; while Figure 2 provides the

proposed research framework that will be used to develop and evaluate the DVDs and Web-based multi-media clips over a period of two years.

A1-A4 and B-C on Figure 2 represent the development phase. Firstly, the script for the multi-media clips has been composed (in both English and Afrikaans) by the main researcher (a professional history lecturer) according to the Revised National Curriculum Statement, learning outcomes, and assessment standards for grades 8 and 9 history (A1 on Figure 2). She is also busy composing outcomes-based learner work cards and a teacher manual to accompany the DVD set (A2 on Figure 2). All scripts are peer reviewed by professional university history lecturers and language editors, and the necessary recommendations are addressed (A1 on Figure 2). During Step A3 on Figure 2, the research and development team are selecting the most appropriate historical artefacts, e.g. visual images, historical film media, newspaper articles, political cartoons, sound recordings of speeches, maps, etc. to be included in the multi-media clips and DVDs. With the assistance of the Digital Media Centre of the North-West University, the researchers are obtaining formal copyright permission for all media used, some of which are purchased via museums and broadcasting corporations, while others are in the public domain. All audio and visual media are professionally edited to enhance their quality. During Step A4 on Figure 2, professional voice artists (narrators) are being used to record the script (A1 on Figure 2) in a professional sound recording studio, and the sound recordings are edited by professional audio engineers at the Digital Media Centre of the North-West University. The audio engineers are also responsible for music and other special effects included in the media clips. During Step B on Figure 2, a professional media editor at the Digital Media Centre is compiling and editing the Web-based multi-media clips, which in turn, are compiled into a set of research DVDs (Step C on Figure C), which will be evaluated among four groups of learners over a period of two years.

Empirical Investigation: Evaluation Phase (Steps D and E on Figure 2)

Ethical Considerations (D1 on Figure 2)

The research team will apply to the North-West University's Research Ethics Committee for ethical clearance prior to the commencement of the empirical study (D1 on Figure 2). Participants will be informed about the purpose and nature of the study. Informed consent will be obtained for all participants and from participating schools, with the understanding that anonymity will

be respected and research results will be reported in aggregated form only. Participants will be informed of their right to withdraw at any time during assessment. All participants will be treated with respect and will participate voluntarily. Instructions will be clear and assistance will be available.

Research Participants (Study Groups)

2010 - Grade 8 History		2011 - Grade 9 History
Learners from Rural School (English DVD set)	→	Same Learners from Rural School (English DVD set)
Learners from Semi-Rural School (English DVD set)	→	Same Learners from Semi-Rural School (English DVD set)
Learners from Urban School (English DVD set)	→	Same Learners from Urban School (English DVD set)
Learners from Urban School (Afrikaans DVD set)	→	Same Learners from Urban School (Afrikaans DVD set)

Figure 3: Four Study Groups

Four study groups (Figure 3) of history learners and their teachers, respectively from a rural school, a semi-rural school and two urban schools in the North-West Province, will be recruited to participate in the evaluation phase of this research project. Teachers will be asked to use the set of educational DVDs, together with learner work cards and teacher manual for the teaching, facilitation and learning of grades 8 and 9 history. The same four groups (learners with their teachers) will first use the grade 8 educational DVDs, followed by the grade 9 DVDs, over a period of two years.

Evaluation (D2 and D3 on Figure 2)

During and after the four study groups used each of the five educational DVDs (with learner work cards and teacher manual) to facilitate teaching and learning in their classrooms, the researchers will visit each school and perform two main evaluations, i.e. (i) objective qualitative case studies and (ii) subjective qualitative case studies.

Objective Qualitative Case Studies (Step D2 on Figure 2)

For this research component that falls within the functionalism research

meta-paradigm, the researchers will perform the following evaluations to collect data:

- Clarification evaluation of the attributes, characteristics, structure, terms, concepts, etc. of the DVD content for teachers and learners.

- Process evaluation of the key activities, implementation, performances and processes while the teachers and learners are using the DVDs, work cards and manual.

- Product monitoring to make sure that the quality and learning outcomes are clear.

- Outcome and impact assessment to assess if learners reached the expected learning outcomes by assessing their work cards, teacher notes, group assignments and progress reports.

Subjective Qualitative Case Studies (Step D3 on Figure 2)

For this research component that falls within the Interpretive research meta-paradigm, the researchers will collect the following data:

- Semi-structured interviews with teachers and learners to understand their unique experiences, impressions, feelings, attitudes, expectations, fears, etc. while using the educational DVDs, work cards and manual for teaching and learning activities.

- Field notes and observations of researchers

- Individual learner experiences reflected in their work cards and learning activities

History is compulsory up to grade 9. Currently, most learners discontinue history as a school subject when they enter grade 10. Therefore, the researchers will also statistically investigate if the history drop-out rate is significantly lower for the four groups after two years of active involvement and use of the educational DVDs, work cards and teacher manual. If this is the case, the DVDs could possibly prove to encourage learners to continue history as a school subject up to grade 12.

Because Web-based multi-media education is necessary to become part of the Global Information Age, the different historical themes/parts of the DVDs will also be released as Web-based multi-media clips on the Internet.

Data Analysis (E on Figure 2)

All the qualitative data collected in Steps D2 and D3 on Figure 2 will be used to compile an integrated dataset using ATLAS^{ti} – a computer assisted software for qualitative data analyses.

<u>**Findings and Research Outputs**</u>

Research Reporting (F on Figure 2)

The findings of this research project will be reported in article format in accredited academic journals. The research team will also present their findings to the Department of Education and to the broader academic community at history conferences.

Feedback to Participants

After completion of this research project, the research team will again visit the schools that participated to provide them with feedback on the general findings of this research project.

Inexpensive Educational DVDs and Web-based Multi-Media Clips (G on Figure 2)

After appropriate evaluation, the educational DVDs and Web-based multi-media clips are intended to be used by the South African education sector, as inexpensive educational media in support of quality education and sustainable social development in South Africa.

Conclusion and recommendations

In this theoretical paper the research team proposes a framework for the development and evaluation of educational DVDs and Web-based multi-media clips with learner work cards and a teacher manual for grade 8 and 9 history in the social sciences learning area according to the Revised National Curriculum Statement, learning outcomes and assessment standards. The framework consists of Development Components, i.e. professional peer-reviewed media scripts, a teacher manual and learner work cards,

copyright permission, editing and use of various media for example visual images, historical film material and audio recordings; as well as a Research Component, i.e. objective qualitative case studies (clarification evaluation, process evaluation, product evaluation, outcome and impact evaluation), and subjective qualitative case studies (semi-structured interviews, field notes and artefacts). Data will be analysed using Atlas.ti to construct an integrated data set. The research team will report the evaluation findings after the two year empirical investigation. After apt evaluation, the educational DVDs and Web-based multi-media will be released as inexpensive teaching and learning tools for grade 8 and 9 history in social sciences learning area.

The research done at the University of Oregon concerning the use of educational DVDs with expanded captions for students who are deaf or hard of hearing,[42] is significant in the inclusive South African educational context, to ensure each learner's democratic right to equal learning and working opportunities, as stipulated by the Constitution of South Africa. The research team strongly recommend research on how resource based learning technologies, such as DVDs, can be adapted as effective educational resources for learners with special needs in the South African educational context.

DVDs can also become a valuable tool to assist South African teachers to self-evaluate and develop their skills, as in the case of the self-evaluation DVDs developed by the Education and Training Inspectorate (Inspectorate) of Northern Ireland.[43] The research team further encourages research on the use of educational DVDs for teacher self-evaluation and professional development in the South African context.

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42 L Anderson-Inman, F Terrazas & U Slabin, *Supported video projects: The use of expanded captions to promote student comprehension of educational videos on DVD* (Oregon, National Center for Supported eText, University of Oregon, 2008).

43 F Crawford, "Improvement through self-evaluation in pre-school education", *Questions of Quality*, 2005, pp. 178-182.